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ARTICLE I.

Case of Limosis Expers, supervening on Chlorosis, with Remarks. By SAMUEL FORRY, M. D. of Westminster, Md.

MISS MARY AGNES, S. S.—the subject of the following narrative, is now ætat. 21; of a constitution presenting physical relaxation and delicate stamina. The period for the natural development of the sexual organization, was attended with that train of morbid phenomena, the assemblage of which constitutes chlorotic disease. After several ineffectual attempts, at remote intervals, towards establishing the menstrual secretion, nature, encumbered by pathological difficulties, found herself inadequate to the task of fully developing the various physiological laws of organized life, instituted by her own wisdom. From that period to the present time, complete suppression, or perhaps retention of the menses, has existed, complicated with all those multifarious manifestations of disease, pertaining to the formation, or developed during the progress, of that protean malady, known under the vague term, dyspepsia. Consecutive implication of the liver, and spinal irritation, evinced by pressure on the lumbar vertebræ, were also manifest. Thus was established a series of morbid actions, which, through a concatenation of sympathies, appeared to extend their influence to every tissue and organ.

Acting upon the principle, that a derangement in the function of menstruation, always follows consecutively in that train of abnormal phenomena, which pertain to the irregular development of puberty, our attention was more particularly directed to its causation. But of all these outward manifestations of dis-

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eased actions, those of the stomach were most imperious in the intensity of their character. This organ was, indeed, so extremely irritable as to eject, instantly, whatever entered it, even articles of digestion the most bland and least irritating. They scarcely passed the cardiac orifice of the stomach before their ejection took place, accompanied with much watery fluid; and this, too, without any effort on the part of the patient, their appearance in the mouth being often her first intimation of the occurrence. The endermic method of applying the sulphate of morphium over the epigastric region, so far succeeded in diminishing this excessive irritability as to render the organ capable of retaining medicines. Various modes of treatment were then instituted, as the varying phenomena furnished a guide to lead us to a rational therapeutics; but as the pathology of this disease is still involved in much obscurity, (assuming that we possess an accurate knowledge of the properties and powers of our remedial agents,) no more than an approximation to a clear and unerring application of our curative means can possibly be attained. As there was much derangement of the hepatic functions, connected with a torpid condition of the bowels, the dejections being small in quantity and unnatural in appearance, recourse was had to some preparation of mercury. Although there was an evident accumulation of fæces, yet the intestines were so obstinately constipated, that even aloes and rhubarb could procure but very small evacuations; but the fear of exciting permanent gastro-duodenitis, prevented their frequent repetition. The moment, however, the mercury produced its specific effect, the secretions were poured out from their hitherto dormant sources, and the alvine discharges were astonishingly free and copious; and this condition of the bowels was maintained for several weeks, during which time, the dejections consisted of three or four daily evacuations, black in aspect, and large in quantity.

The accumulated feculent matter having been removed by the continued use of laxatives, and the hepatic, intestinal, and dermoid functions being, in some measure, corrected, the patient was induced to observe strictly all the dietetic rules laid down in the treatment of chronic irritation of the gastro-duodenal mucous tissue. In accordance with the principles of Marshall Hall, the rational hope was now entertained, that pure country air and regular exercise in conjunction with the administration of the ferruginous tonics, would soon restore the young lady to the unalloyed pleasures of renovated health; but the illusive hopes,

excited by this flattering calm, remain yet to be realized. An evident amelioration of the symptoms was manifest, in the returning glow of health and the resuscitation of long lost energies; but this temporary relief was soon succeeded by the return of that mental and coporeal misery, entailed by this disease upon its unfortunate victims.

Subsequently, the treatment has been so modified as to meet our pathological views, indicated by the existing phenomena of morbid action. Irritation of the spinal marrow, at one period of the disease, claimed our particular attention; but long-continued and extensive counter-irritation, by means of the ung. canthar. and ung. antim. tart., removed all tenderness, evinced by pressure on the lower dorsal and upper lumber vertebræ: so manifest, indeed, was the improvement of the general health, that we flattered ourselves into the belief, that we had now compelled this obscure malady to confess its secret cause: and elated with a hope that allured but to deceive, we hastened to gladden the heart of our desponding patient with the prospect of a speedy recovery.

At no time, however, were the powers of digestion more than partially re-established. A slight but continued mercurial impression on the system was several times excited, and always with an amendment of the digestive powers as well as the general condition of the system. It was, in truth, only at the periods immediately succeeding ptyalism, that her stomach, during the last two years, could retain solid food of the least irritating quality. Medicines were generally retained, but solids and fluids were as generally rejected. Great uneasiness, and frequently excruciating agony, in the stomach and bowels, followed the introduction of all ingesta save what was purely fluid. To the sensation of hunger, she has been a stranger for more than two years; and it is only at the earnest solicitation of her anxious parents, that she can be prevailed upon, sometimes for the period of eight or ten weeks, to swallow any thing but tea sweetened with sugar: and singular to relate, the fluid ejected from the stomach, very frequently, exceeds in quantity that taken. At irregular and often remote intervals, the stomach, however, regains, for a time, its healthful function; and, doubtless, the other organs concerned in the assimilative process, perform their peculiar functional acts. For example, during the present summer, she has eaten, with apparent satisfaction, the fruits of the season, such as strawberries, early peaches, and cherries; and contrary to our views on the subject of dieteties, her stomach has of late retained and

digested radishes and cucumbers; but this is merely another illustration of the diversified idosyncracies of individuals in regard to the caprices of this organ and its power of converting ingesta, apparently the most incompatible with its enfeebled condition, into the elements of our organization.

During all this period of mental and corporeal suffering, the young lady has borne up with a fortitude almost supernatural. It has only been, at short intervals, during some exacerbation of her disease, that she has been confined to bed. Even at this time, she is capable of walking a considerable distance, of riding out, or attending to the ordinary vocations of a household. The diversified functions of the system appear, to a casual observer, to move in harmony; and even the apparent glow of health often animates her countenance.

Inasmuch as this disease, from its origin, was one of more than ordinary interest, frequently presenting strange and anomalous characters, we occasionally apprised our friend, Professor S. Colhoun, of its progressive history, of whose valuable information we availed ourselves in the management of the case.

As the parents of this young lady are individuals of respectability, veracity, and intelligence, so much so, indeed, as to preclude the suspicion that any deception might be practised by either party, we were induced to propound the following questions for their consideration.

1. How long a period has elapsed since the habit of fasting was first contracted?

2. How long, at any special time, has her diet been wholly restricted to tea and water alone?

3. How long, at any distinct period, to water alone?

4. How long, at any time, has she existed without either solids or fluids?

To which interrogatories, the appended reply was kindly furnished:

1. "By the 1st August, twenty-eight months will have expired."

2. "According to the best of our recollection, nine or ten weeks was the longest period; and on frequent occasions, it extended to six or seven weeks. During the last two years, the solid food eaten by her, as regards animal diet of every description, does not exceed an half pound; and during the same space of time, she has not consumed a common-sized baker's loaf of bread. With the exception of the fruit of this season, tea sweetened with

sugar, has been her principle article of nourishment. The different kinds of imported tea, as well as our indigenous variety, especially the flowers of sassafras, have, from time to time, been had recourse to. For a short period, she has, sometimes, used coffee, chocolate, or porter; and very frequently, after drinking any of these beverages, it was instantly rejected, accompanied by an increased quantity of watery fluid. We will add that, for many months of this time, she scarcely slept two hours out of every twenty-four."

3. "As pure water does not agree with her stomach, she has very seldom made use of any."

4. "No particular length of time remembered. The little nourishment, however, taken for the space of two years, is quite incredible. Very often, a single cup of tea, and this too rejected instantaneously, would constitute her daily allowance for a succession of days."

Upon a review of this case by a follower of the modern French school, I fear he will find much to condemn. Under the influence of his physiologico-pathological doctrines, he will behold, as a natural consequence of this "violent perturbating treatment," the steady march of the disease onward, the intensity of the organic lesions increased, and by the irradiation of the augmented irritation from its primary seat, the progressive implication of other and remote organs. But it was under pathological views of this character that our treatment was first instituted: To subdue the local irritation and consequent vascular congestion, was the end constantly kept in view. Depletion, revulsion, and total abstinence were called into requisition; but nothing short of the mercurial impression on the system could restore the suspended secretions and dislodge the enormous accumulation of fæces: and it was from the mercurial treatment only, that any amendment ever resulted, and this improvement invariably followed each successive administration of blue pill or calomel. The mineral tonics, narcotics, aloes, &c. variously combined, were then employed; and unless eccoprotics of the more active kind were, from time to time, prescribed, all the disagreeable symptoms attending constipation of the bowels, were rapidly induced, such as furred tongue, offensive breath, flatulence, nausea, and headache. Unfortunately, an unconquerable aversion to the use of enemata, in this country, often deprives the physician of one of his best resources. In forming a proper estimate of this case, however, it should be borne in mind, that the impaired functions of the

assimilating organs, digestion and sanguification, connected with the excessive development of the lymphatic system, so impressed upon this disease its peculiar chlorotic features, as to distinguish it, in an eminent degree, both in regard to its pathology and treatment, from a case of mere chronic gastro-duodenitis.

Remarks.—As a history of this kind presents an anomaly in nature of so extraordinary a character, as almost to repulse sober belief, it may not be an exercise of misapplied time, to investigate this curious subject with some degree of attention. Denied the key that unlocks the arcana of creative wisdom, we are reduced to the necessity, in order to shed a faint ray of light upon this inscrutable mystery in the animal economy, to pass in rapid review a few of the numerous examples of similar instances of chronic fasting, drawn from the various orders of the animal kingdom.

In the history of various kinds of fishes, it is a well established fact, that pure water alone affords nourishment enough to supply the actual wants of nature. Leeches and tadpoles are familiar examples of this assertion. The goldfish and several other species of the carp are endowed with similar powers: even the pike, with all his natural propensity for gluttony, will both live and thrive, when confined in a marble basin of pure water. Rondolet kept a silver fish in a glass globe of pure water alone, for three years, during which space of time it continued to grow so rapidly as to fill the vessel in which it was confined.

That the mere atmospheric fluid is sufficient to support animal life, is a familiar fact in the history of snails and chamelions. In the philosophical transactions, as quoted by Dr. Good, we are informed that Mr. Baker had a beetle secured, during three years, in a glass confinement, under severe dietetic regimen, consisting of nothing more than mere atmospheric air; at the expiration of which period, he had the good fortune to escape from the hands of his tormentor, and wend his way in search of a more nutritious diet. And in the Monthly Review, as cited by the same writer, we are apprized of a similar experiment performed by Latreille: he stuck a spider, remarkable for the apparent gusto with which it devours its prey, to a piece of cork, and precluded it from all food whatever for four successive months, when it still manifested as much liveliness as ever. Vailliant had a spider that lived eight months without food, when its strength was sufficient to kill another, as large as itself, put under the receiver where it was kept. Two cerastes or horned snakes were con-

fined, by Mr. Bruce, in a glass jar during two years, without giving them any nourishment.

This peculiar tenacity of life appears to be possessed more especially by animals of an amphibious nature. Frogs and toads, tortoises and lizards, have been found apparently dead and fossilized in trunks of trees and blocks of marble, so deeply imbedded that they must have been so situated, in many instances, for more than a century. The mouth is often found glued up, with a viscid substance, so tenaciously, that in the very effort to dislodge this material, they frequently die of suffocation. Our ephemerides, indeed, present such a multiplicity of examples, based too upon authority of the most unquestionable character, that sober judgment can no longer, consistently with the true spirit of philosophy, refuse to yield up its candid prepossessions, in view of oft-confirmed experience, the touchstone of all hypothetical reasoning.

In Dalyell's Introduction to Spallanzani's Tracts on Natural History, many instances are adduced of animal life being sustained under the privation of food. He tells us, upon the authority of Buffon, that a royal eagle survived five weeks without food. A badger lived a month; and several dogs, thirty-six days under a total abstinence from sustenance. A crocodile lived two months under the same regimen. Leuwenhoeck had a scorpion that lived three months; and bears and vipers have lived six. John Hunter enclosed a toad between two stone flower pots; and at the expiration of fourteen months, it was as lively as ever. Instances are quoted by M. Lue of a similar character: closely confined in sealed vessels, the same animals lived eighteen months without food or respiration. With Redi, land tortoises lived eighteen months; a chameleon, eight; and a viper, ten. *Cum multis aliis.*

In relation to some of these lower orders of animals thus confined, it has been thought that invisible animalculæ might form their aliment. The experiments of Dr. Edwards, of Paris, have thrown some light upon this subject: he has ascertained that some indirect communication of air is absolutely necessary to support the life of lizards, toads, and other amphibials of the batrachian family; that blocks of mortar and heaps of sand are sufficiently porous for that purpose; but that, if encompassed by mercury or even water, they perish inevitably. During the torpid state of hybernation, it has been argued that, inasmuch as the secretions and excretions are suspended, the small expendi-

ture of the matter might be easily supplied by the gradual absorption of the adipose tissue. Thus the bear, dormouse, &c. awaken from their torpidity in a state of emaciation; although it was an opinion current among the Romans, that the dormouse became fatter during the hybernating season. In the Linnæan Transactions, there is an account of a hog, buried in its sty, for 160 days, under a great mass of the chalk of Dover-cliff; when overwhelmed by the mass, it weighed 160 lbs.; but at the time it was released, its weight did not exceed 40lbs. In what this peculiarity of organization, which enables these animals to maintain the vital principle in this long-continued dormant state, may exist, is a question easier to propound than to answer.

With these facts before us, we are the better prepared to receive with less hesitancy than under opposite circumstances, the remarkable anomaly in nature, presented in the narrative which has elicited these remarks. Not only analogy, however, but the recorded experience of successive centuries, has proven incontrovertibly that man, under certain conditions, possesses the power of existing without aliment for a long period of time.

As the records of medicine abound in such facts, I shall refer to several, which, from the high character of their reporters, are too well established to allow of controversy. Raulin mentions an instance in which fasting was endured fifty-two days, water alone being drunk: and Dr. Willan attended a patient whose only article of diet, for sixty-one days, consisted of water flavoured with orange juice. In the Edinburgh Medical Essays, for 1720, Dr. Eccles relates the case of a beautiful young lady, in whom muscular rigidity supervened in consequence of the sudden death of a fond and indulgent father: the muscles of deglutition were so violently contracted as to preclude the possibility of swallowing any thing during two distinct periods of time. Unaccompanied with the sensation of hunger or thirst, the former instance continued for thirty-four, and the latter for fifty-four days: although occurring in quick succession, her loss of flesh was but inconsiderable. Numerous examples of a similar kind, but of much longer duration, have been collected by Haller and other physiologists, some, indeed, extending to no less a period than sixteen years; but in the different volumes of the Philosophical Transactions, we meet with the histories of cases of three, ten, fifteen, and eighteen years' continuance; and these, too, of so unimpeachable a character as to be entitled to our unsuspecting confidence. In one instance, four men, buried in a deep excavation, were

obliged to live upon spring-water alone for twenty-four days, before the superincumbent stratum of earth could be removed. A later number of the same journal contains a much more extraordinary account, drawn up with the most rigid scrupulosity and supported by strong evidence of a concurrent tendency. The subject is a young man ætat. 16; thrown into an inflammatory fever, in consequence of the imprudent use of cold water, when in a profuse perspiration, he recovered with such a dislike to aliment of every description, that, for eighteen years, he lived upon water alone.

In a still later volume, 1777, is a most interesting and singular case in the person of Janet McLeod. This narrative is minutely detailed by Dr. Mackenzie, confirmed by the parents of the patient and the elder of the parish, and corroborated as to its general truth by the minister of the parish, the sherif-depute, and six other individuals of reputable character. Subject to epileptic paroxysms from the age of 15 to 33, the energies of her system were sapped, the elevator muscles of the eyelids were paralytic, and her mouth was firmly closed by a rigid locked jaw. Entirely confined to her bed, the lower limbs were retracted towards the body; the powers of speech and deglutition were nearly lost; and to the sensation of hunger and thirst, she was a stranger. Periodical discharges of blood from the nostrils, apparently derived from the lungs were her only egestions. During a period of upwards of four years, with the exception of two or three occasions, neither liquids nor solids of any description were swallowed; no, not even the semblance of deglutition could be observed. With a pulse feeble but regular, she mostly lay like an inanimate object; her features had not lost their fulness, nor were her limbs emaciated; the glow of health still lingered on her countenance, and her bosom presented the round and prominent contour of her sex. At the expiration of eight or nine years, during which period Dr. Mackenzie visited her from time to time, he found her condition somewhat improved.

Another remarkable instance, still in the recollection of many, is the noted case of Ann Moore, of Tetbury, who died in 1825. In March, 1807, she first began to confine herself to tea and water alone, having for some time previously gradually limited herself to a small daily portion of bread, in consequence of an increasing obstruction in deglutition; and in the ensuing September, she pretended to abstain from all ingesta, both liquid and solid. According to Dr. Granger, who saw her about two

years subsequently, she was now altogether confined to her bed, her pulse feeble and slow, her limbs extremely emaciated, having lately lost the use of her lower extremities, and her nervous system so excitable as to be thrown into convulsions by any sudden surprise; although her voice was moderately strong, and the exercise of conversation was borne without any apparent fatigue.

Suspecting that some deception might be practised by this woman in order to attract visiters, and obtain pecuniary grants, Dr. Henderson, a practitioner of the neighbourhood, published his suspicions in 1813. At length an intelligent committee was arranged, with the consent of the woman, with the view of watching her, in rotation, by night and by day, for an entire month. Thus completely debarred the use of fluids as well as solids, the tenth day found her so extremely debilitated as to be scarcely able to confess her imposition. "On the whole," the committee conclude, in their report of her history, "though this woman is a base impostor with respect to her pretence of *total* abstinence from all food whatever, liquid or solid, yet she can, perhaps, endure the privation of solid food longer than any other person. It is thought by those best acquainted with her, that she existed on a mere trifle, and that from hence came the temptation to say that she did not take any thing. If, therefore, any of her friends could have conveyed a bottle of water to her, unseen by the watch, and she could occasionally have drank out of it, little doubt is entertained that she would have gone through the month's trial with credit. The daughter says that her mother's principal food is tea, and there is reason to believe this to be true." But this opinion presents the case to our view in a more extraordinary light, than we had regarded it previously to the detection of the fraud; for we are now in possession of confirmatory evidence of the assertion, that this woman existed for years upon tea and water alone, articles ordinarily regarded as nearly destitute of nutritious properties.

To explain these extraordinary facts was no easy matter. Our every step is doubtful; we have no clue to guide us through the perplexities of the labyrinth in which we are wandering; no pole-star to direct our course through the unfathomable lake over which hangs shadows, clouds and Cimmerian darkness. Sceptics may laugh and critics may entangle themselves in the bewildering mazes of this subject; but facts speak for themselves; their occurrence, in different countries, has been too frequent,

and the narration of many cases too well authenticated, to justify the refusal of our assent.

The opinion may be safely advanced, that in most cases, and probably in all, water, tea, or some other fluid, is absolutely necessary; although Hildanus assures us that Eva Flegen, when he saw her in 1612, had abstained for sixteen years entirely from liquids as well as solids. These cases have occurred equally in health and disease; and it is somewhat remarkable that this abstinence is better borne in the latter than in the former condition. In cases of madness it sometimes occurs, that persons obstinately refuse either to eat or to drink for many weeks, with little apparent loss of bulk or strength. In scirrhous affections of the cardia and œsophagus, in catalepsy, and certain hysterical disorders, a period of fasting may be endured, under which, in opposite circumstances of the system, nature had long since succumbed. This disease, according to the learned Dr. Good, a variety of the genus *limosis*, has generally been induced as a consequence of some pathological action, productive of much pain or uneasiness in deglutition or digestion; has supervened on rigid mortification of the natural feelings and appetites in a course of religious discipline; or has had its origin in that severe abstraction of mind, consequent on intense application of the mental powers. A few instances, however, are recorded in which an instantaneous and unconquerable aversion to food was the first intimation of the disease.

Yet, allowing these persons the free use of water, and all the advantages of air to the skin and lungs, what benefit can we derive from the admission on the principles of our chemical knowledge and physiological experiments. The product of animal life consists, in a great measure, of carbon, which is not contained either in air or water, when in a state of purity. Again, nitrogen is necessary for the animalization of our vegetable ingesta; but granting the position that the carbon may be derived from some secret source, chemistry teaches us that water is equally destitute of these two constituent principles of the animal organization; and the question, whether azote is introduced into the human system by the process of respiration, is still regarded by many as *sub judice*, although the experiments of Dr. Priestly and Sir H. Davy concur in sustaining the affirmative. The absorption of nitrogen by the skin, however, seems to be proven by the concurrent testimony of many experimenters. Hence it might prove no less interesting than useful, to inquire

into the action of the skin and lungs in this class of persons. As eleven ounces of solid carbon, according to Lavoisier and Sir H. Davy, are emitted from the lungs of a healthy adult in twenty-four hours, how different might be the issue of such an investigation! An examination into the action of the skin might present results equally unlooked for and surprising.

In endeavouring to elucidate these phenomena, hypothesis has luxuriated in all the rhapsody of her wildest vagaries. The circle of perpetual mutation, a condition imposed on all created matter, it has been supposed, may be suspended. But as physical science has not yet been able to follow up the plastic and fugitive substance, which composes the whole of the visible world, through all its various modifications and combinations, and to fix, in its last shape and character, the ultimate elementary atom, it becomes us to exercise a spirit of modesty and caution rather than expose our ignorance. Among the ancients, earth, air, and water were regarded as elementary principles; but these the experiments of modern chemistry have proved to be compound. As the method of analyzing bodies is constantly being improved, such as are now regarded as compounds, may soon lose their claim to an imperishable existence; even oxygen and nitrogen have already had their throne shaken to the very foundation. And as to those subtle and active agents, caloric, light, electricity and magnetism, all our knowledge is derived from their effects on material substances. Hence, it is not contrary to the dictates of reason, to suppose that the different forms of matter may ultimately be found to be the same in essence, and that from various combinations and modifications of these primordial particles, all the manifold substances in nature proceed. Now as we behold the vitality of worms, insects, fishes, amphibials, birds and mammifers, occasionally supported from the two sources of air and water alone; as we behold the *aërial epidendrum*, on account of the rich beauty of its flower, and the exquisite fragrance it diffuses, suspended in the atmosphere, by silken cords, from the ceilings of oriental rooms, and continuing, from year to year, to put forth new foliage and new flowers, and diffusing new odours; it ought not to be regarded as an extravagant absurdity, to suppose that, subject to the laws of organic chemistry, air and water may be decomposed into their rudimental elements; and that the vital principle may so re-arrange these primal monads, as to find in the new compound the *pabulum vitæ* of the older physiologists.

Westminster, Md. August 10, 1835.

ARTICLE II.

Case of an individual who amputated his Penis and Testicles in a fit of delirium tremens. Communicated in a letter to the Editor, by W. C. McPherson, M.D. of Marietta, Lancaster county, Pa.

A case occurred in the course of my practice a few months ago, the particulars of which I have a wish to give you, and if you think the facts at all worthy of notice, you are at perfect liberty to use them as you may think most proper. It is, I think, a rare case—perhaps no such one is on record. The individual is an Irishman, has for a few years been addicted to habits of excessive intemperance, and has, in the course of that time, been attacked frequently with *mania a potu*. On the 18th day of April last, in a fit of this character, he amputated his *penis*, within half an inch of the base, dissected out the *testicles*, and swept off the whole of the upper part of the *scrotum*—all attached, even the *ligaments* which bind the testicles to the *scrotum* remain. It would seem to me, from the manner of the injury, that he commenced operations at the lower side of the *penis*, (for it is *beautifully skinned* from the base to the tip,) and then run the knife on each side of the testicles, and separated them from their situation in the scrotum, before he made his last sweep. About one half hour after the injury, (and about eight o'clock in the evening,) I was called to see him. I found him exceedingly temulent, and bleeding, though not very profusely at that time. I searched for a long time, but was not able to grasp a single artery; they had all retracted beyond discovery. The cords had also retracted into the abdomen, so as to be beyond reach. You can well imagine my feelings, at this time, young in practice, and doomed to bear the responsibility of so important and singular a case. I conceived my only hope left was to rely on styptic applications, and I accordingly prepared a saturated solution of sulph. of zinc—applied it on folds of linen, and by morning had the satisfaction of finding that the hemorrhage had ceased. These dressings were disturbed as little as possible for several days. Cloths dipped in cold water were constantly applied, and I conceive with much good effect. His temulent symptoms were attended to immediately, but it was not until three days had almost expired that he slept at all. He became so refractory at last, that we were compelled to tie him in bed. After sleeping thirty-six hours, interruptedly to be sure,

he awoke a rational being, but not without feelings of disgust, horror and shame. The urethra was kept open by the occasional introduction of the catheter. He never experienced the least difficulty in urinating, nor does he at this time. The wound was treated as a simple ulcer throughout, and I have now the satisfaction of saying that he is *entirely well*, and drunk almost every day. The instrument with which the deed was done was a small bladed penknife, and that very dull too—happily for him, I should think. I have the preparation in my possession, and should be much gratified if I could show it you.

ARTICLE III.

A case of Chorea successfully treated with Fowler's solution of Arsenic. By ROBERT C. CUMMING, M.D. of Frederick county, Maryland.

THE embarrassment experienced by the practitioner in the treatment of some of the diseases usually denominated *nervous*, is a matter of frequent complaint, and of this number chorea may be considered one of the most conspicuous. Although high authorities have testified in strong terms, to the almost infallible efficacy of their favourite modes of treating this disease, yet the physician will meet with signal disappointment, who relies with much confidence upon any *particular* plan, until at least its pathology, now unquestionably obscure, shall be better understood. The following case is related, not because of any novel feature it presents, but merely to exemplify the value of an article already favourably known as a remedy in this distressing affection.

Rebecca D. ætat. 14, was attacked on the 7th of April, 1834, with slight convulsive motions of the muscles of the face, arms and legs, which were accompanied with some degree of lassitude and languor. These symptoms continued to increase for about ten days, when I was requested to see her. I found the following symptoms present: All the muscles of voluntary motion were affected, those of the face, neck and extremities particularly; there was an inability to remain for any length of time, in any one position, the spasmodic action being so violent as to turn the patient suddenly and involuntarily, from side to side. The pulse was regular, though somewhat irritable; the tongue covered with a thick yellowish coat. No pain was complained of,

except in the lumbar region, with some degree of tension and fulness about the lower part of the abdomen. Her appetite was not impaired, though deglutition was very difficult, and there was an inability to convey food or drink to her mouth; the vocal organs were also so much affected as to render her articulation indistinct. No remission of the symptoms was observable, except during sleep; and of this she enjoyed only about four hours in the twenty-four, when merely slight contractions about the face and neck occurred.

Considering the treatment recommended by Dr. Hamilton as particularly appropriate to this case, I at once commenced the use of purgatives, and continued them steadily and perseveringly for one week, but with an aggravation rather than a diminution of the symptoms. Supposing from the age of the patient, the pain in the lumbar region, &c. that the symptoms might be connected with an effort of nature to produce the menstrual secretion, I now combined emmenagogues with the purgatives, and continued their joint administration for some time longer, but still without lessening the severity of the symptoms. Believing that I had given this plan a fair trial, without deriving benefit from it, I now resolved to institute a tonic course, and forthwith administered some of the preparations of iron, with some of the most efficient vegetable tonics, but yet without any obvious advantage. My attention now was directed to Fowler's arsenical solution, of which I ordered eight drops three times a day, gradually increasing it to fifteen drops. A very material improvement was apparent as soon as the effect of the remedy on the system was manifested by a swelling of the integuments about the face, when it was suspended for some days, and then resumed for a few days longer. In ten or twelve days from the commencement of its exhibition, the symptoms had abated in a considerable degree, and about a week more, established a perfect cure. The patient has never had a return of her malady, and is now in possession of excellent health.

ARTICLE IV.

Cases illustrative of the Therapeutical application of the Bandage.

By J. F. E. Hardy, M. D. of Asheville, North Carolina.

This communication is not intended to offer any new principle, or new mode of practice, to the profession; but to give the result

of my experience in the use of the bandage, as proposed by Professor Dudly, in injuries of the extremities. Since I read his article on the use of the bandage, in the last number of the first volume of the Transylvania Journal, I have used it extensively in fractures, lacerations, ulcers, and inflammations of the extremities, and always with satisfaction. Much care is necessary in its application to ensure success, as I have seen it in the hands of well-informed physicians do manifest injury, in cases which I afterwards relieved with the same remedy. With these few preliminary remarks, I confidently offer the following cases to the profession, in proof of its efficacy in my hands. I could adduce many more of a similar character.

Case I.—J. Watkins, aged 13 years, was accidently shot by a man when cleaning the cock of his rifle, at the distance of about three feet from the end of the gun; the rifle carried a large ball, and was loaded with a heavy charge of powder. The ball entered the knee-joint in front of the articulation of the fibula with the tibia; it carried away nearly the whole head of the fibula, tearing up its connections with the the tibia, extensively lacerating its capsular ligament, breaking up the insertion of the biceps cruris muscle, and, as it passed out on the inner side, injuring the bone as low down as the origin of the gastrocnemius internus muscle. I was not called in for nearly two weeks after the accident, but from what I could learn from the family, a considerable amount of the synovial fluid had escaped from the wound. An ignorant old man in the neighbourhood, who makes much ado about his skill, was called on immediately after the accident, and filled up the wound with sugar, camphor, and soot; the latter to stop the blood, and the camphor and sugar to heal up the wound. This produced inflammation, suppuration, and such constitutional symptoms, that I was called to see the lad a distance of thirteen miles. I found him in a most deplorable condition,—his father being a very poor man, he was on an uncomfortable bed spread on the floor, which was laid with loose planks. His constitutional symptoms were, a frequent and small pulse; occasional moisture of the skin; urine more copious than natural; variable appetite, some nausea, frequent chills, and a furred tongue, with the most distressing nervous agitation. The walking as lightly as possible over the loose planks of the floor produced tremors, and caused him to scream out. He slept but little, and had the appearance of rapidly wasting away. I proceeded to examine the wound and on removing the poultices, that the

friends had put to it, a large amount of a thin, unhealthy-looking pus, streaked with blood, was discharged. I satisfied myself that the suppuration extended considerably above and below the knee, and that the cavity of the joint itself was considerably involved. Sloughing had not taken place as extensively as I had anticipated, but several fragments of bone had been previously discharged. A medical friend who accompanied me, advised immediate amputation of the thigh. But from the exhausted situation of the patient, and from the ill-condition and unhealthy appearance of the wound, I doubted its success, and proposed the use of the bandage, with bark and wine. My friend advised a blue pill to be given before the use of the bark, which had a good effect in producing a bilious discharge from the bowels, the stools having been previously clay coloured. Linen cloths spread with simple cerate were laid to the sore, and the bandage applied from the toes to the hip as firmly as he could bear it. A large opium pill was prescribed, and I left him for the night.

After ten o'clock, next morning, I visited him again, and found him more tranquil;—that he had slept more than usual, experienced less pain in the knee, and much less of the distressing nervous excitement. We then put him on a free use of the bark and wine, with a moderately rich diet, consisting of soup, panada, with wine, &c. Every third day I re-applied the bandage, and increased its firmness. Under this treatment he gradually improved, and was able to walk on his crutches, at the end of four weeks, with a partial anchylosis. He walks now without the aid even of a stick, and is able to plough, or do any work requiring no great muscular exertion.

Case II.—Miss Sails, a hearty country girl, fourteen years old, accustomed to labour, was pricked with a lancet in several places on the back of the hand, (by an old man who could not see well,) for the purpose of abstracting blood to relieve headache. She experienced no particular pain at the moment, but next day, being engaged at the wash-tub, handling bed-clothes, which were heavy, and required great exertion of the hands to wash them, she was attacked at night with a pain in the hand, which extended up to the elbow. It was sufficiently severe to keep her from sleeping soundly that night, and next morning she discovered some swelling of the hand, and a purple discolouration around the punctures made by the lancet. The pain increased, and the swelling extended up the arm to the shoulder joint. She became alarmed,

and sent for the same 'knowing old man,' who commenced poulticing it with fresh *cow dung!* (which is a sovereign application with many persons in this country.) This he kept up for ten days; at the expiration of which time I was sent for to amputate the arm. My friend, Dr. Osborn, accompanied me, and we found the limb enormously swollen to the shoulder. The fore-arm and hand presented a curious appearance; its size was three times that of the other; the fingers were so swollen that each one stood out firmly and distinct, without the power of flexion to any considerable degree. The hand and fore-arm were covered with blisters of a livid appearance, some of which had broken, and were discharging a thin purple sanies. She was suffering much pain in the arm of rather a peculiar kind: it was not constant, but occasionally lancinating, shooting from the hand to the elbow, and left a burning sensation, as if hot water had been thrown over it. She complained a good deal from handling the arm, but no evidence of fluctuation could be discovered by the touch, although as we afterwards ascertained, a large quantity of pus had formed. Her constitution suffered considerably. She was feverish, unable to sleep, without appetite, her bowels constipated, and she experienced occasional chills. We soon satisfied ourselves that, if amputation was resorted to, it must be at the shoulder joint; and we were not anxious to undertake so formidable an operation, as neither of us were graduates at that time. As the use of the arm was of the utmost importance to her, being poor, and compelled to work for a living, we resolved to attempt to save the limb by the use of the bandage, which we immediately proceeded to apply. The hand was covered over with lint spread with simple cerate, to prevent the bandage adhering to the small ulcer at each orifice. We then applied the bandage firmly and carefully from the fingers to the shoulder joint. She complained a great deal during its application; but we gave her fifty drops of laudanum, and left her for the night, having some other patients to visit.

At nine o'clock, next morning, we saw her again, and found her perfectly easy, but said she had spent a dreadful night; had slept none until five o'clock in the morning. She had experienced so much pain, that about four o'clock she removed the bandage from part of the hand. As soon as it was loosened, matter gushed out from between each finger, after which she became easy and slept until we saw her. On examination, we found the bandage loose and requiring to be re-adjusted. After we had removed it, we found that the limb had decreased very

much in size, owing to the large amount of matter discharged. The bandage was then re-applied more firmly, and she suffered much less during the operation this time than on the previous occasion. We continued to re-apply it daily for ten days; then three times a week for two weeks, when we dismissed her cured. This was the only treatment she received, save a few doses of salts, with infusion of senna. The use of that hand and arm is now as perfect as it had ever been.

Case III.—D. H. a single woman, aged about 40, very fleshy, weighing near two hundred pounds, in stepping incautiously from a height of three feet, received her whole weight on the external part of the right foot. The distance, together with her immense weight, dislocated the ankle, and fractured the fibula about its mid-way. Being only two miles from the place at which the accident occurred, I saw her very soon afterwards. I found the ankle dislocated, the malleolus internus broken off, and the external malleolus projecting some distance through the skin. The foot was completely turned up, and reposing on the inner part of the leg. As she sunk to the ground, her body inclined to the right side, with the right leg across a stone with a sharp projection, which penetrated the soft parts, and fractured the fibula about its middle. Here we had a compound dislocation and a fracture of the ankle joint, and a compound fracture of the small bone of the same leg. I proceeded immediately to replace the foot and adjust the fracture, which was accomplished in a few moments by the ordinary means. From the success I had previously experienced in the use of the bandage, I determined to give it a trial in this important case. I first applied adhesive strips to the external wound, then the bandage (of thin calico) soaked in vinegar and water, which was adjusted firmly from the toes to the knee. Over this were laid strips of paste board, soaked in vinegar and water, which were confined by the roller brought down over the limb again from the knee to the toes, giving it some careful turns about the ankle to keep the fractured process in its place. The first dressing remained on three days; after which, for two weeks, I applied it every other day;—then for the next four weeks, twice a week, at which time she was able to walk with an ordinary cane. She is now perfectly well, and does not even limp. This constituted the whole treatment, save v. s. twice, and a few doses of salts.

Case IV.—Mrs. Bartlett, aged 25 years, a small and very delicate woman, having only a few months recovered from a protracted attack of phlegmasia dolens. She walked out one after-

noon last winter, with her child in her arms, to see her husband, who was clearing ground, and having reached the field, being much fatigued, she seated herself on a log, within the length of a pine tree which two young men were cutting down. A few moments after she had taken her seat, one of them told her to move quickly, that the tree would fall in that direction. At that moment the tree began to fall, the cracking of which, and the falling towards her, confused the woman so much, that she fell over the log on which she sat, the right leg remaining on the log, with the outer part upwards. In that situation the tree caught it, the log protecting the body and her child. A projection on the body of the tree (a pine knot) came in contact with the leg about midway, passing through the bones and soft parts, crushing the former for several inches, completely transfixing the limb, and pinning it to the log beneath. A limb of the tree struck the same leg just below the knee-joint, producing a compound fracture of that point. The fracture of the bone, and the injury of the soft parts being transverse, the wound gaped so much that I could perceive the superior end of the bone elevated above the inferior. The muscles had been so much lacerated and torn by the pine knot, that they were hanging out in shreds at the external wound.

The messenger who came for me, informed me that Mrs. B. had broken her leg, and wished me to attend to it. Supposing it a simple fracture of the leg, I only took with me a bandage, and some pasteboard for splints. When I arrived they had moved her to the house, where I had her laid on a table, and was not a little embarrassed when I exposed the limb, and found it in this lacerated condition, without any aid save the ignorant people of the neighbourhood, and no means with me for amputation, which I considered at that moment indispensable. It being near night, I resolved to dress the limb with the bandage, and wait the morrow for operating. I was compelled to use six stiches before I could keep the lacerated muscles within the wound. Having no surgeon's needle with me, I used an ordinary large sewing needle. I placed the limb in the hands of three men, and proceeded to adjust the parts and apply the dressing. The muscles were so much torn, that it required no great exertion to overcome their action. Adhesive strips were first laid over the wound, and the bandage firmly applied from the toes half way up the thigh; pasteboard strips soaked in vinegar and water were next applied, and the bandage brought down over them and terminated at the toes.—A thin board, slightly padded,

was placed under the leg, extending from the heel half way up the thigh.

With this dressing I had her put to bed, and ordered 50 drops of laudanum. Fearing that hemorrhage might take place during the night, I selected the most intelligent person present, and directed him to place a bandage around the thigh with a compress over the femoral artery, and to pass a short stick beneath it, so that if bleeding came on, he could twist the bandage until the hemorrhage ceased. With these directions I left her for the night.

Next morning I visited her early, in company with Dr. Baird. We took with us a case of amputating instruments, expecting to be obliged to remove the limb. When we arrived, we found her more comfortable than we had expected. No bleeding had taken place, and she had slept some. Finding her so much more comfortable than I had anticipated, I resolved to allow the dressing to remain on a few days, and if possible, to save the leg, which, in her poor condition in life, was of more than ordinary value. We visited her daily, and at the end of the third day, I proceeded to remove the dressings. To save the pain and trouble of moving her to the table, I had the foot board of the bed taken out, and with several assistants, raised her in the sheet, and moved her down over the foot of the bed, until the upper end of the board, I had placed under the limb, rested on the foot board, which served to support the leg. When I had removed all the dressings, the fracture was so extensive, that it was with difficulty we could hold the leg firmly enough to re-dress it. The edges of the wound looked healthy, and had commenced mattering. We now laid over the wound, cloths spread with simple cerate, and re-applied the bandage as before, which was continued every three days for six weeks. The suppuration was very inconsiderable; and as the bandage had kept the parts in close contact, union, by the first intention, took place throughout nearly the whole extent. This mode of dressing for compound fractures is very opposite to those laid down by authors generally. My experience proves, that most of the fears in dressing compound fractures are groundless, and that these injuries recover sooner, and with less suppuration, when treated with the simple roller, than with the various complicated, and to the young practitioner, (particularly of the country,) perplexing apparatus described in the books. Our patient continued to improve; and at the end of eight weeks, was able to be up on her crutches. There is an

inconsiderable shortening of the limb, and a slight inability to flex the knee-joint, which is improving. I am at a loss to know whether the stiffness was occasioned by the fracture near the joint, or the laceration of the muscles. She took a few doses of salts and senna, and afterwards, bark and wine, for two weeks. We have the satisfaction of knowing that, by our perseverance and attention, we saved this poor woman her leg. This case occurred in February, when the ground was constantly covered with snow, and the thermometer averaging from 6° below 0, to 10° above. The family was extremely poor, living in a small open log cabin, without any of the comforts, and almost without the necessaries of life.

Asheville, July 20, 1835.

ARTICLE V.

Observations to disprove the Identity of the Gonorrhœal and Syphilitic Virus. By NATHANIEL POTTER, M. D. Professor of Pathology and the Practice of Medicine in the University of Maryland.

DEAR SIR,—I perceive in your Archives for January last, that the celebrated Professor Hufeland has revived the doctrine of the identity of the matter of gonorrhœa and syphilis. This question was warmly agitated forty years ago, and I had entertained the opinion that it had been definitively settled in the negative, and the doctrine exploded.

In the winter of 1794–5, I made an attempt, in conjunction with my friend, the late Doctor Samuel Cooper, (at that time a house pupil of the Pennsylvania hospital,) to liquidate the controversy by experiment. The notes were retained in the possession of the doctor for publication, and after his untimely and lamented death, fell into my hands. Many of those experiments were repeated in 1801, by Doctor James Tongue, of this state, who performed several others which, with those we had made, I deemed conclusive, and the subject ceased to excite much interest.

We propose to offer (with due deference) our reflections at this late period of the controversy, and invite those with whom we have the misfortune to differ, to examine our reasoning and the results of our experiments impartially, and to offer such reflections as they may deem suitable illustrations of the matter in dispute.

We propose to treat the subject both synthetically and analytically, with the intention of showing the remarkable coincidence between accurate observation and all the experiments that have been rightly conceived and fairly conducted. By pursuing this course, we may, perhaps, account for the various and contradictory opinions that have been propagated on the pathology and practice in the venereal disease. With the origin and chronology of either of the varieties, we have nothing to do in this place, although it would not be difficult to establish by history the remotest antiquity of both, which have probably existed almost as long as there have been men and women in the world.

Unless we are egregiously deceived, the doctrine of identity which we controvert, has been the principal cause of the mystery that still surrounds the whole subject, as well the pathology as the treatment. The prevalence of this cardinal error seems to have vitiated both the theory and practice.

We are well aware that there are some from whom it is unsafe to differ in such a discussion, but we are as well assured that great names sometimes impose great errors, and that they are the most difficult to eradicate.

We are constrained to admit, that objections may be raised to any mode of investigation we can adopt, but they would lie with equal force against any that could be conceived in pursuing the nature of any other contagion. If it be required for us to demonstrate the elementary principles, or to show whether a contagious matter is simple or compound, we acknowledge it cannot be demonstrated, and we denominate it specific, because we are unacquainted with its real essence, and because we see each and every one produces a train of symptoms in sui generis according to its peculiar nature.

Nevertheless, this mathematical precision is not necessary to our purpose; we judge with sufficient precision from the phenomena they produce. Let it be admitted that we could render all the essential qualities of animal poisons cognizable by chemical analysis, it does not follow necessarily that we would reflect the least light on the peculiar influence they exert on the nerves.

For many ages, while pathology had scarcely any fixed principles, all diseases arising from sexual intercourse, were classed under the generic appellation, venereal. Hence, we find it was not till the seventeenth century, that a difference between syphilis and gonorrhœa was made a serious question. The opinion that they are distinct essences was never gravely promulgated, till it

was done by Mr. John Hunter, who seems never to have been entirely satisfied, though he determined in favour of a plurality of poisons.

In examining the arguments in favour of the opposite sect, we will notice those who have made the principal figure. A large majority of the German and French faculty are enlisted in favour of identity, while the British and American doctors are arrayed in the opposition, with but few exceptions.

We are not aware that any theory or experiments have been promulgated different from those contained in the writings of Swediaur, Hunter, Wallace, and Hufeland. They all profess to have derived their theories from experience; and although many of the facts they have stated are true, as they stand insulated, they have been sophisticated by false theory, and are therefore deceptive.

In his essay on this subject to make out his issue, Mr. Hunter does not seem to have been inspired by his usual powers of discrimination. The felicity of his reasoning seem to have failed. He predicates his first proposition upon a historical question, which is still not only unadjusted, but the authorities contradict each other. The manner in which the disease was introduced into the islands of the South Sea, is relied on by Mr. Hunter to prove that it was the gonorrhœa that first appeared there, and that, consequently, the form of chancre or real syphilis proceeded from it. He derives his opinion from captains Cook, Wallis, and Bourgoinville, who admit the existence of the diseases there, while neither of them draw the line of demarcation between the two varieties; nor do they insinuate that either appeared prior to the other. Nor can there be found in any authority, historical or medical, a fact to authorize the premises he has assumed. He attempts to fortify his reasoning by another argument that is altogether speculative, and is repugnant to all our modern opinions in pathology, to our doctrines of the action of animal poisons, and the most recent and fairest experiments. From the general tenor of his reasoning, we can but conclude that he ascribes the difference in the secretions of gonorrhœa and syphilis entirely to the difference in the organization of the parts secreting them. If this were a well-founded hypothesis, their respective qualities would be different; but when we find, by experience as well as experiment, that the matter of chancre always occasions chancre into whatsoever texture it is inserted, even in the urethra, the seat of gonorrhœa, (as will be demonstrated by experiment,) we are obliged to dissent. And in ac-

cordance with this fact, the matter of gonorrhœa can never be made to produce a chancre. It is not the organization of the part that modifies the inflammation, but the specific character of the virus. It may produce a different ostensible form, but the substance will be the same. In accordance with this fact, we see the matter of chancre will maintain its specific properties as long as it has an existence. It invades in all the forms of which the soft solids are susceptible. The mucous surfaces, sometimes the cellular membrane, the absorbents, glands, muscles, tendons, and even the bones, none of which can be affected by gonorrhœa by any human contrivance, and impart nothing but syphilis. If the different organs do present different diseased appearances under the operation of the same poison, they still preserve their specific character. An ulcer on the prepuce differs in aspect from one in the skin or in the throat, but they all maintain their essential character, and communicate the same disease. We do not know that the effects of the syphilitic virus have ever been displayed in the muscular texture of the heart, in the lungs, stomach, liver, pancreas, kidneys or intestines, but it is not ascertained that they could not be directly affected by inoculation. On the contrary, it is more probable, that if the matter of syphilis could be introduced directly by inoculation into any of these organs, syphilis would be the consequence. We only contend, it does not get there indirectly through the absorbents. If the gonorrhœal poison can originate all the ravages of the syphilitic virus in all the distant organisms we find it, it may affect the fœtus in utero, through the fluids of its progenitors, a phenomenon which can only be traced to an original syphilitic origin.

The simultaneous appearances of the two forms, or the occurrence of either after the other, on which Mr. Hunter relies to sustain his principle, will be shown to be superficial and sophistical, when we explain the manner in which the disease has been contracted in all such cases.

Swediaur urges no special plea for the doctrine of identity. He assumes it as an acknowledged fact, and fancies that there are two kinds of gonorrhœal discharge from the urethra, one of which is virulent and syphilitic, and the other simple mucus, which is innocent. This is a strange anomaly in pathology. The excitement of simple mucus from the lacunæ within the glands is not a disease, and therefore has no specific property. Gonorrhœa consists in a poison and propagates its own similitude, and can impart no other disease. This poison has a specific

attraction for the mucous surface of the urethra, and is drawn into the orifice by the subsidence of the erectores muscles after coition. The matter of chancre is more tenacious, and is received upon the external parts, the glans penis, prepuce or labia, and even where it is arrested at the orifice of the urethra, it occasions a chancre, and never extends to the upper part of the canal, unless it be by artificial means, and, if long retained there, does not produce gonorrhœa, but a genuine chancre.

Wallace proceeds altogether on analogical ground, and is so indefinite that his reasoning can scarcely be reduced to a tangible shape. Because the virus of small-pox and the vaccine are sometimes followed by undefined and anomalous appearances, he presumes that syphilis may occasion as great a variety, unaccountable and illy defined. The analogy of the variolous virus is as unfortunate and inappropriate an example as could have been selected from the catalogue of contagions. No poison can be more absolute and immutable in its progress. It maintains its virulence and contagious property in all its possible forms and combinations, and by whatsoever name it may be called, or appearance it may assume, it never fails to multiply, and is identified with its original. The author ascribes all the dermoid anomalies in vaccination to the quality of the virus, instead of the predisposing condition of the skin. It is the condition of the subject, and not the contagion; for no principle is better established, than that which is familiar to all inoculators, that the same matter will impart a fair and undisguised eruption to one, and all the vagaries and spurious eccentricities of the skin to others. The various appetencies of bodies cannot always be foreseen, and as to the analogy drawn from the vaccine virus it is scarcely worthy a serious reflection. It is, viewing it in the most favourable light, but a fig-leaf covering against variolous contagion. So far is it from holding a rank in power with the prophylactic powers of the small-pox, that it does not effectually protect eight of any ten who are vaccinated. While the small-pox asserts its prerogative, and enters into alliance with no power, the more feeble and almost impotent character of the vaccine virus, enters into co-partnership with many of the dermoid family, and vitiates the whole scheme of protection in theory and practice. In all bodies in health, with no organism embarrassed by any other cause, all agents proceed in their operations to produce simple and clearly defined effects, although they may differ in degree. This principle does not attach more exclusively to any animal poison than that of gonor-

rhœa and syphilis. In none are their distinctive characters more perspicuously displayed. This position will not be deemed visionary or extravagant when we shall have detailed certain experiments.

Professor Hufeland, so well known as a veteran in the fields of physiology and pathology, is the last we recognize as an abettor of the doctrine of the identity of the two poisons.

From one so justly celebrated, we anticipated the disclosure of some new principle or experiment. A fair analysis of his doctrine will evince our disappointment and regret. Hufeland predicates his theory upon three distinct propositions.

1. "*Two individuals may be infected by one person. The one may have gonorrhœa, and the other chancre.*" This proposition has been relied on by every one who has contended for the same doctrine, and will be refuted by the reasoning and experiments we propose to bestow on them generally.

2. "*The same cause—Persons infected with gonorrhœa may communicate syphilis to another, or infect himself with that disease.*" This is only a part of the first proposition reversed, to force it to work vice-versa: because, if we identify the two secretions, there can be no reason why either of them should not produce the other. The difficulty in which the doctor has involved himself will be explained on a different principle; by the mode in which both the contagions are contracted. The second part of the proposition inculcates a sophism, which is a kindred error to the other, inasmuch as it adheres to the principle, that because the matter of gonorrhœa is syphilitic, it maintains all its contagious properties in all other tissues to which it may be distributed. One error almost always begets another. "*Gonorrhœal matter introduced into the eye* may give rise to a venereal *ophthalmia.*" The epithet venereal is here employed in a sense synonomous with the other epithet syphilitic; and is one of the concatenated train of errors, predicated upon its great original, identity. That affection of the eye which originates from the actual contact of gonorrhœal matter, produces a disease of the mucous membrane of the eyelid only, in the first instance, and although it sometimes implicates the adjacent parts, and runs into a high degree of inflammation, is gonorrhœa still, and the secreted matter, however virulent, will not inoculate a chancre. We have made six attempts to excite a chancre, by this matter, but neither chancre, or even common inflammation, could be produced. The glans penis, prepuce and arm have been severally essayed in vain. The secretion from the eye nevertheless falls

in with our views, and is the most conclusive evidence of the diametrical opposite character of the two poisons. In two of three patients who were subjected to the test of the ophthalmic secretion through the urethra, genuine gonorrhœa was produced. The third could not be infected: but the experiment ended in a triumphant vindication of the doctrine of diversity. One of the subjects inoculated from the eye of the first through the urethra communicated a clap to a woman, and it was of a very virulent degree.

If the professor intends to comprehend, in the general expression, "*venereal ophthalmia*," iritis, which the looseness of his phraseology leaves doubtful, his doctrine ought to have been better defined, for although the iris may be concerned in gonorrhœal ophthalmia, (although we have never seen it, after forty-five years practice,) his opinion may lead to a dangerous and destructive practice. When we speak of venereal iritis, we intend to convey the impression that it is syphilitic, and not gonorrhœal, and we are sustained in the opinion by our experience in practice. We do not assert that a gonorrhœal ophthalmia cannot be cured by mercury, but we and all experienced physicians are well assured that it is not the appropriate remedy. On the contrary, syphilitic iritis is cured by mercury like all other syphilitic affections, and it is not certain we can effect a cure without it. There cannot be a greater paradox.

The third part of the same proposition follows necessarily from the two preceding. "*Gonorrhœa too suddenly suppressed may be followed by bubo, chancre or condyloma.*" Here the same strain of illogical deductions pursues him under the pressure of the primary error, and as the premises are unfounded, the conclusion cannot be true. As far as the accidental appearance of bubo is connected with gonorrhœa, it is known to arise from sympathy or an extension of inflammation from the urethra, and is never syphilitic. It cannot be arrested in its progress by mercury, but is always aggravated and more likely to suppurate. If, during the existence of gonorrhœa, a syphilitic bubo appears, it is from a chancre or the matter of chancre taken up without a local affection. This can only be cured with certainty by mercury. If a gonorrhœal bubo suppurate, the poison will not inoculate a chancre, nor any other disease different from the effects of pus taken from a common phlegmon. From a syphilitic bubo it communicates a chancre. We feel assured these results can be no secret to any person conversant with venereal practice. We have performed these experiments time after time,

with both the secretions, and in practice proceed without hazarding an hypothesis, in which alone our antagonists have erected the whole superstructure of their doctrines.

The fourth item of this proposition would not be noticed, were it not that we desire to avoid the imputation of partiality and disrespect. Fluor Albus: "*Daily experience shews, that the fluor of the female, which supplies the place of gonorrhœa, is capable of communicating syphilis.*"

It would be superfluous to criticize such a sentiment at this enlightened period of medical science, as it is notorious that lucorrhœa arises from a different source, is not contagious, and is no more communicable than a catarrh or any other mucous secretion.

The third proposition is altogether original, but no less sophistical than those we have examined. It is unsupported by experience, as every other must be that is repugnant to a law of pathology. It is one of those physical impossibilities which abhors all the rules of right reason, and carries the conviction of its futility on its face.

"*The difference between the virus of the two affections, is, that that of gonorrhœa is incorporated as it were with the mucous secretion, and acquires thereby a milder character, so that it may lose its infectious quality. It is besides thrown off with the mucous secretion.*"

The answer to the first part of this dogma would be a refutation of the whole proposition. That there is a mucous secretion formed in the urethra in health which lubricates its surface, is admitted, but it is natural and so bland that it never irritates until it is changed and contaminated by something extraneous and unnatural. The moment a poison excites an action in the mucous vessels, the natural secretion ceases, and a new one is formed; and therefore, there can be no commixture of mucous and poison, unless there are two sets of secreting vessels, or the same vessels can take on two secreting processes at the same time. The act of secretion is performed by the arteries; and once the gonorrhœal action is produced, every particle of matter secreted is as genuine as at any subsequent period; and although it may be diluted, will propagate its own similitude, till the action that formed it is changed by destroying the morbid process. We have injected the matter of gonorrhœa in its incipient scarcely formed state, and considerably diluted in all its stages, and still gonorrhœa was invariably the consequence. Does not this correspond with all our experience in the effect of all other conta-

gions that are not too aërial to be made palpable? Do not the virus of small-pox and the vaccine produce the same actions in all their progress, from the slightest vesicular to their ultimate state of secretion?

The second part of this proposition has been substantially refuted, but, we may add, his own words in fortification, if he can derive any from them.

"*The virus of chancre, on the contrary, is more active and corrosive, for the same reason that corrosive sublimate, or any other poison, is more energetic than when enveloped in mucus.*"

This position is too loose even for the base of an hypothesis. If it were true, it would be easy to confirm it by a simple experiment. The virus of chancre diluted must of necessity communicate gonorrhœa, which never could be effected, but invariably a chancre, if any thing. As to the analogy between corrosive sublimate and the matter of syphilis, or any other animal poison, the learned professor will labour in vain to run a parallel between them. Chemistry may torture animal matter by heat, re-agents, and all the processes that ingenuity can devise, till it is annihilated, and it cannot form the bichloride of mercury, nor can it by a synthetic operation, make blood or any of the secretions from it. The laws of living animal matter are separated from finite art, by infinite wisdom, and although they may be imitated, can never be reached.

Let us now test the question by the best lights of experience. Facts are abundant, and if fairly construed, will not leave a ray of doubt to which side the scale preponderates.

Of all the arguments that have been advanced in favour of the theory of identity, the simultaneous appearance or the immediate succession of one to the other varieties has been most implicitly relied on. Our opponents have availed themselves of this plea without the suspicion of sophistry. Their premises are specious in a prima facia view. The facts stated are true as far as they are detailed. They have told the truth, but not the whole truth.

There are innumerable examples of the secondary symptoms of syphilis while the patient is labouring under gonorrhœa. There are many who are affected by both at the same time, and as many in whom either of them succeeds to the other, but are either of these accidents sufficient to account for all such cases in the principle of identity? Many have drawn such conclusions, who never investigated the origin of either; and we find others who have analyzed all the circumstances from which it was physically impossible, that the two affections could have

been derived from the same affection, whose pride of opinion would not permit them magnanimously to renounce the prejudices of education.

The several accidents that lead to such deceptive appearances and false experience, may be reduced to the following heads:

1. A connection with one labouring under both gonorrhœa and syphilis, communicates both diseases; and as both do not appear exactly at the same time, the second is charged to the first, and thus, by this superficial reasoning, they are placed in the relation of cause and effect, although there are two diseases specifically different from two essentially different poisons. We have traced this error to its source, and have demonstrated and have ascertained by ocular inspection, that the two causes always did exist or had been in operation, or in another mode which we are about to describe.

2. A gonorrhœa or chancre is received singly, and soon after the other form appears, and the patient has been concerned with more than one person who may have had either, he concludes that the first occasioned the second. He does not understand the rationale, because he draws his conclusions from premises which are partial. It is no matter of surprise that an unlettered man should reason in this way, but there is not the same apology for men of science who have drawn a conclusion that violates the laws of pathology, and leads to an unsuccessful and mischievous practice.

3. There is another and more mysterious occurrence that is not uncommon, utterly inexplicable by a superficial observer, for which there is some extenuation even for physicians. A patient has been exposed with one who has a chancre, and at some period not very distant, he finds a bubo forming, or his throat affected with soreness, an erisypelatus redness, or his skin affected with copper-coloured blotches or other secondary symptoms of syphilis. If such a man labour under gonorrhœa, or has been cured some years before, he does not think of ascribing them to any other cause; nor can you convince him of his error, though his hypothesis, and perhaps that of his physician, is contrary to a law of nature. It was not known to physicians till lately, that the matter of chancre could be absorbed and occasion all those secondary consequences. This is one of the most deceptive and dangerous states of syphilis, because it sometimes passes the inguinal glands which although they are good sentinels, sometimes sleep, and the enemy enters the citadel unperceived and unsuspected.

We have seen all the consequences of syphilis contracted in this way, although no affection of the prepuce or glans penis had preceded them. Like the fountain of Arethusa, it sinks beneath the surface in one region only to break out in another.

All these secondary or ternary affections bear the distinctive marks of genuine syphilis, and are recognized by skilful optics in whatsoever aspect they appear, and cannot be safely confided to any remedy but mercury. What then becomes of the theory of identity? If those appearances, to which alone we give the appellation syphilis, originate from gonorrhœa, why do we not treat it and all its consequences by mercury? If the votaries of this doctrine preserve consistency, they are bound on their own principles to rely on it as we do, almost to the exclusion of other remedial agents. None of them will attempt to cure a gonorrhœa, or any of its consequences, by any preparation of mercury, locally or generally administered. Uniform experience has rejected the practice, and it has been exploded by general consent. Although mercury is justly entitled to all the reputation it has acquired in certain conditions of other mucous membranes, it either does not cure or aggravates gonorrhœa, and all its consequences, and nothing more firmly supports the doctrine of the independent and specific nature of the gonorrhœal poison.

What are the consequences of gonorrhœa? How are they most effectually cured? Chorde, sympathetic bubo, inflamed prostate gland, inflammation of the neck of the bladder, gleet and stricture,—in these there is nothing specific; the contagious secretion is formed in the urethra, and sometimes in the prepuce, but none of the other affections are contagious; they consist in inflammation alone, and therefore cannot be removed by mercury, which often exasperates them. The appropriate remedies for gonorrhœa and all its consequences make no favourable impression upon syphilis in any of its varieties. They are altogether expletives.

Although the facts and arguments we have stated appear to us conclusive, lest there should be some too fastidious to be satisfied, we will descend to a more analytical examination. We do not propose to detail all the particulars of the experiments on which we rely, but such as bear directly on the question. Some of them were performed by the late Dr. Samuel Cooper and myself, at the Pennsylvania hospital, in the winter of 1795. Others may be found in the Inaugural Dissertation of Dr. James Congee, of Maryland, who graduated in the University of Pennsylvania in 1801.

To ascertain whether the matter of gonorrhœa would excite a chancre, or produce any other effect, Dr. Cooper and I inoculated ourselves with the matter of a virulent gonorrhœa, in the arm, and no effect could be perceived, but from the puncture, and this disappeared like any other mechanical irritation. This experiment was performed on two other persons and with a similar result. This was the result also in the case of Dr. Tongue himself, who was inoculated by Dr. Barton, who repeated the experiment a little varied. He used a portion of gonorrhœal matter mixed with calomel, but without effect.

Dr. Cooper's and my experiments, with those of Dr. Tongue, unite in establishing the fact, that gonorrhœal matter injected into the urethra, alone, or with mercury mixed, invariably produces gonorrhœa, unless it is washed off by the urine. We performed this experiment seven times, and the disease was produced in six of them. With calomel, and with the bichloride, its effects are not varied, nor with any other commixture that we are acquainted with. These experiments were confirmed by me, in 1807, to remove the scruples of my colleague, Dr. James Cocke, and with his assistance.

Although we might draw the conclusion from those experiments, and from the mode in which a chancre is contracted, that there is a difference between the two poisons, it would be only presumptive, and therefore we instituted another series, with the matter of syphilis, directly. Dr. Cooper took the matter from a chancre that had been in the venereal ward four days, under mild mercurial treatment, and had appeared three days previous to admission, and introduced it into the arm of one of our fellow students. It began to inflame on the evening of the fifth day, and on the seventh there could be no doubt that it was a genuine chancre. From this, on the eighth day, matter was introduced into the arm of another patient who had recently recovered from acute rheumatism. A chancre was formed in the usual time and perfect in form. The patient was prevailed on to take no medicine to arrest its progress till the fourteenth day, when he complained of tension and pain in his right groin, and a mercurial course was instituted, the chancre cured and the inguinal tumour resolved. This experiment was repeated four times during the winter, and was confirmed by Dr. Tongue.

"He inoculated his fellow student, Mr. Wootton, in the arm, with matter taken from a chancre an hour before it was inserted. The part inflamed gradually, and in four days a complete chan-

cre was formed. Having satisfied himself that the poisonous quality of gonorrhœal matter could not be destroyed or even mitigated by any commixture of mercury, he took matter from the chancre from which he made the last experiment, and mixed it with an equal quantity of calomel, and inserted it into Dr. Wootton's left arm. No chancre or other disease followed.

Dr. Tongue then inoculated himself with a portion of the matter of a chancre which had communicated the disease to two persons. It was mixed with a solution of the bichloride of mercury; one scruple to an ounce of water—No chancre.

Another portion of the matter was mixed with a solution of gum Arabic, introduced into the arm, and a chancre was the consequence. From these experiments Dr. Tongue drew the conclusion, that mercury is endowed with specific properties, and that it is an antidote to the syphilitic virus, whether applied directly to the matter, out of the body, or taken into it through the absorbents. Although we were inclined to this opinion many years before, my lamented colleague, Dr. James Cocke, advised me to repeat Dr. Tongue's experiments in 1808, and by his assistance we were occupied occasionally during the summer. Having finished them with great care, trouble and patience, we confirmed the results of Dr. Tongue's labours.

The impression that there is an anti-syphilitic property in mercury, by direct mixture, is not altogether novel. Dr. Cullen, in his Materia Medica, under the article mercury, relates the following experiment. "A physician took a quantity of matter from a venereal chancre, and mixing it with a quantity of Plenk's gummy solution of mercury, applied the mixture to a sound person, but could not find that it produced chancre or any other syphilitic symptom." Dr. Cullen thought it probable that the gummy solution might render the mercury inert.

The following experiment was made to ascertain whether there was any foundation for the doctor's conjecture. "Dr. Tongue inoculated a person with pure venereal matter, mixed with an equal quantity of a solution of gum Arabic, in the proportion of two drachms of gum to eight ounces of water. It did not prevent a chancre from being formed."

The following experiment is reported by Swediaur. "Doctor Harrison took the matter of an ulcer evidently syphilitic, and after having triturated it with the gummy oxyde of mercury, he tried to inoculate for syphilis with the mixture. No infection was communicated. Some of the same matter, not being mixed, produced a chancre."

We cannot assert unequivocally that there is no other agent that will, when mixed with the matter of chancre, render it inert. Mercury is the only one we have been able to discover. Doctor Tongue inoculated a man with an equal portion of the virus of chancre and a solution of the sulphate of copper, one scruple to the ounce of water. A chancre was the consequence. A similar result followed with a solution of the sulphate of iron, with the like proportion of both.

Notwithstanding the conclusion from these experiments would seem to be irresistible, there still remained one other that ought to be tried, as it would, if it should terminate like those already reported, leave no subterfuge or retreat for the advocates of identity. This last experiment becomes necessary, from the disposition in our antagonists to cover their opinions under the hypothesis of Mr. John Hunter: the difference of organization between the urethra and glans penis, with the prepuce and some other parts.

On the 9th of December, 1808, Doctor Cocke made the following experiment, at my request.

Having procured a healthy subject who agreed to any measure we might choose to adopt, we took a portion of matter from a chancre, which was mixed with a tea-spoonful of tepid water. At nine o'clock at night we emptied the urinary bladder, first, by causing him to discharge his urine, and secondly, drawing off the remainder by the catheter. We then gave him two grains of opium, with a request that he should retain his urine till our next visit, if practicable. We saw him at eight o'clock the next morning, before the discharge of his urine, which occasioned no inconvenience. At the same time of night, on the tenth, the experiment was repeated, in the form it had been performed before. On the morning of the eleventh our subject passed urine about six o'clock, and as he felt no change, told us he thought we had done nothing. As we considered two such essays sufficient to impart the disease, we kept the patient under our observation till the fourteenth, when he came to me and complained of an itching about three inches from the orifice of the urethra. This sensation increased, till at the end of three days it became exquisitely sensitive and painful, especially when it was irritated by the passage of urine.

As our subject had now become our patient, we ordered an opiate at night to mitigate his pain, which was excessively troublesome. On the evening of the third day from the first symptoms, we observed a small weeping from the urethra, which

was tenacious, and of a semi-purulent tendency, though it was occasionally slightly streaked with blood. The ardor urinæ and pain seemed to be confined to a small spot, neither being propagated along the canal, either way, but confined to the original place of contact. The secretion never became copious, and maintained the same appearance, totally different from the matter of gonorrhœa in either of its stages. It was much less in quantity, more tenacious, and was not accompanied by any tenderness, or sense of disease between the seat of the pain and the orifice of the urethra; nor was there any soreness or tension in the glans penis. It was only by pressure that any discharge could be effected, except in the morning after the patient had slept many hours. We permitted these symptoms to continue uninterrupted four days longer, and as we now concluded that a chancre had formed in the urethra, we instituted a mercurial course, which seemed to make no impression upon the symptoms, for twelve or thirteen days, although the protoxide of mercury and inunction were faithfully employed. The pain gradually diminished, and finally subsided at the end of twenty-seven days, when the salivary glands were evidently affected, though the ptyalism was not profuse. The protracted cure in this case was probably to be attributed to the irritation of the urine passing over a sensitive diseased surface. This is often to be observed in the treatment of chancres at the orifice of the urethra. In cases where the sensibility will admit of it, a catheter or a canula may be introduced, and the irritation mitigated or corrected. On the sixth day after the symptoms commenced, I inoculated a young man with the matter taken from the urethra. On the fourth, the part became red, and proceeded in the ordinary course of other chancres, till its progress was arrested by mercury.

The result of this experiment explains the error that doctor Harrison fell into in his experiment. He inoculated the urethra with the matter of chancre, and because the operation was followed by discharge from the urethra, he concluded, too precipitately, that the discharge was gonorrhœal, and consequently that the two poisons were convertible, either into the other. He should have made the experiment we have done, and saved us the trouble.

Notwithstanding the difficulty with which the matter of chancre finds its way into the urethra by any natural channel, it happens occasionally by accident, like an artificial inoculation, as we could shew by several examples.

SELECTED PAPERS.

Researches on the Symptoms and Diagnosis of Aneurisms of the Thoracic Aorta. By GEORGE GREEN, M.D. Fellow of the College of Physicians; one of the Medical Inspectors of the House of Industry, and Lecturer on the Practice of Medicine in the Richmond Hospital School of Medicine and Surgery, &c.

THE difficulty of ascertaining the existence of an aneurism of the thoracic aorta in its early stage, and before it has given unequivocal external signs of its presence, is, I believe, very generally acknowledged by those practitioners who have directed their attention to the investigation of this subject. Laennec, it is well known, expressed it as his opinion, "that in the present state of our knowledge, there assuredly exists no certain means of ascertaining the existence of this disease, until it shows itself externally, and that even when the tumour has made its way through the parieties of the chest, it is not always distinguishable from tumours of a different kind."* It is now, however, with great reason supposed, that the inventor of the stethoscope undervalued its powers in detecting the disease in question, and in particular Bertin† and Dr. Hope‡ state, that with its assistance the diagnosis of aneurisms of the aorta does not present more difficulties than the diseases of the heart and lungs.

In order to show that these authors have not spoken of the power of this instrument in too favourable terms, I shall proceed to detail some cases of aneurism of the thoracic aorta, in which a correct diagnosis was given, in the absence of any external symptom, and where the principal signs were obtained by careful and repeated examinations with the stethoscope. I shall in the first instance relate the cases with as much conciseness as possible, and afterwards offer some remarks, which a consideration of them has suggested to me. For the dissection of these aneurismal tumours, and for very copious and accurate notes of their histories, I am indebted to Mr. Robert Mayne, the Clinical Clerk of the Whitworth Chronic and Hardwicke Fever Hospitals, House of Industry.

CASE I.—*Double Aneurism of the Thoracic Aorta. Sudden Death from Rupture of the Sac into the left Bronchial Tube.*

Luke Moran, a sawyer, was admitted into the Whitworth Hospital, House of Industry, on the 7th of April, 1834. He had been subject for the last two years, to a cough, attended with great dyspnœa, and frothy expec-

* Forbes' Translation, p. 690. † Maladies du Cœur, p. 143.
‡ Art. Aneurism of the Aorta, Cyclopedia of Medicine.

toration. The cough seized him in paroxysms, generally at night. He also complained of irregular pains, of a lancinating character, through the chest. These symptoms became so severe and unremitting, that he was obliged to discontinue his business six months previous to his admission.

When he came under my care the following were his symptoms. A cough of the description mentioned above, and which lasted for half an hour at a time. He described it as attended with a sense of impending suffocation. The dyspnœa was induced or aggravated by the slightest exercise; he referred to the top of the sternum as the seat of the greatest distress. During the act of inspiration, the trachea was deeply drawn behind that bone; his breathing was laryngeal; he complained of darting pains through the chest, and slight dysphagia; the pulse in the radial arteries was the same; turgescence of left jugular vein; there was no external tumour or visible pulsation; nor œdema or numbness of the upper extremities. The chest sounded clear all over, on percussion; on applying the stethoscope, a distinct impulse was communicated to the instrument over the upper third, and to a short distance on either side of the sternum. The impulse was much stronger than that of the heart; it was not attended with any distinct bruit; respiration in left lung feeble, loud and clear in the right, especially on a forcible inspiration. There was also a distinct impulse communicated to the instrument for a considerable distance down the back, to the left of the spinous process of the vertebræ; no purring tremour could be detected; a distant but distinct bruit de soufflet in this situation; impulse and sounds of the heart normal. When the instrument was applied to the axilla, or to the back, in the situation mentioned, the respiration appeared to be almost laryngeal in the top of the left lung, but was natural in the right, and loud and distinct. On the supposition of there being an aneurism of the aorta, he was ordered the mistura digitalis of the hospital, and a small bleeding from the arm, with leeches to the top of the sternum. He remained under this treatment for five days; on the morning of the 12th April, just as I had left his bed, and had proceeded to the case next in the ward, I heard him give a sudden cry, and on turning round, observed him sitting up with his hand pressed on the left side, and ejecting blood from his mouth. His countenance was indicative of great alarm; on questioning him he complained of intense pain in the mammary region of the left side, and expressed his conviction that he was about to die. The quantity of blood spit up was considerable, and was of an arterial colour. A loud rattle, resembling a mucous rale, was audible in the top and centre of the left lung. From the moment he uttered the cry, he rapidly sunk. His pulse became weak, and in a short time imperceptible; the respiration more and more laboured; his forehead was covered with a cold perspiration, and in half an hour from the first accession of the pain, he died with the lips and extremities cold and ex-sanguineous.

Post mortem examination.—The heart and pericardium did not present any unnatural appearance. On cutting into the substance of the left lung, its parenchymatous structure was found to be injected with blood, which was also found in great quantity in the pleural cavity. The right lung was similarly injected in its posterior half, its anterior edge was emphysematous. The injected portions could easily be broken down by the finger. The aorta was enlarged, and on slitting it up atheromatous deposites were found between its inner and middle coat. From the anterior surface of the vessel, at the point where it winds round the left bronchial tube, an aneurismal sac was discovered about the size of a small orange; it communicated with the left bronchial tube by an opening just large enough to admit a probe. The interior was lined with fibrinous deposites, and it had slightly compressed the left bronchial tube. The œsophagus was situated to the right of the tumour. On removing the lungs, another aneurism on the anterior surface of the aorta, was discovered, somewhat larger than the first, and corresponding to about the seventh dorsal vertebra. It had contracted strong adhesions to the posterior surface of the left lung, and the interior was also lined with fibrous deposites similar to the first.

CASE II.—*Aneurism of the descending Portion of the Arch of the Aorta. Sudden Death without Rupture of the Sac.*

The case I shall next detail was that of a woman named Anne Lee, aged 27. She was of a full habit, and a florid complexion, and was admitted into the Whitworth Hospital on the 8th January, 1835. The history she gave of her case was as follows:—About two months previous to her admission she fell down a flight of stairs on her back, since which time she experienced pain and continual weakness in that situation.

The pain, on her admission, was confined to the part of the spine corresponding to the second, third, and fourth dorsal vertebræ. About six weeks before she applied for advice, a cough, attended with a sense of tightness and oppression of the chest, made its appearance, followed shortly afterwards by a difficulty in swallowing. The increasing severity of these symptoms induced her to apply for admission into the hospital.

My attention was first forcibly directed to this case by hearing the woman cough. It was loud, harsh, and of a peculiar ringing character, and the same retraction of the trachea, deep behind the sternum, was observed in this as in the former case. Before I proceeded to explore the chest I took the following note of the general symptoms. A loud, harsh, and ringing cough, attended with a frothy and rather copious expectoration. It seizes her in paroxysms, during which she is obliged to sit up in bed for fear, as she states, of suffocation. The cough is nearly incessant, but particularly severe at night; dyspnœa distressing, especially on making the slightest exertion. A difficulty in swallowing, referred to the upper third of the sternum, where the morsel appears to

stop, and she requires the aid of a drink to assist it on to the stomach. She complains of a pain on pressing the third and fourth spinous process of the dorsal vertebra. The pain is of a darting character, shooting from the spine across to the sternum, and completely traversing the thorax. Pulse in both wrists the same in strength and regularity; no numbness, or twitchings, or œdema in the upper extremities. Appetite good; tongue clean and moist; bowels regular; respiration hurried; catamenia deficient the last six months; pulse 98, full and regular.

The following were the signs furnished by the stethoscope: A clear sound obtained all over the chest on percussion; the respiration in the right lung distinct, but accompanied by a kind of blowing sound, when the instrument was applied posteriorly, about the situation of the bronchial tube, or in the axilla of the right side. The respiration in the left lung was feeble, and sometimes nearly inaudible. An obscure impulse, accompanied by a bruit de soufflet, in the interscapular region. Both these phenomena most distinct at the left side of the spine, and confined to the situation where she complained of pain on pressure: they were most remarkable when the arterial system was excited by any sudden exertion. Anteriorly an impulse was communicated to the stethoscope at the sterno clavicular articulation, and sub-clavian region of the left side. The impulse was attended with a double sound, and was somewhat stronger than that of the heart. An obscure bruit de soufflet was heard in the same situation; the impulse and sounds of the heart were natural. She complained of pain when percussing the top of the sternum. She was ordered a small bleeding from the arm, leeches to the top of the sternum, and a mixture containing tinct. digitalis. She was allowed a little meat for dinner, with milk for breakfast. Absolute rest enjoined. Under this treatment she appeared to have obtained relief for a short time, but the cough, dyspnœa, shooting pains, and difficulty of swallowing soon returned with increased violence. General and local bleeding on several occasions were necessary to mitigate the severity of these symptoms.

On the last examination, two days before her death, I took the following note of her symptoms:—February 3d, a strong double impulse a little below the sterno-clavicular articulation, at the left side of the median line of the sternum, accompanied by two distinct sounds, and a clear bruit de soufflet. Impulse diminishes towards the heart, which retains its natural impulse and sounds. No expansive pulsation found on pressing the fingers deep behind the clavicles; left jugular vein turgid. Posteriorly, at the situation of the third and fourth dorsal vertebræ, a decided and, apparently, a single impulse, accompanied with a bruit de râpe, communicated to the instrument. These signs diminish in intensity as the stethoscope is applied dov n the spine at the left side. Respiration presents the same characters as on the first examination, but

more clearly marked. On pressing the ball of the thumb forcibly to the spine, at the situation of the impulse, a tremor is communicated to the hand; the pressure produces pain. On looking along the anterior surface of the chest horizontally, a distinct elevation perceptible at the top of the sternum, where percussion, also produces pain, and pulsation can be felt; no dullness in the situation of the impulse. All the general symptoms increased in severity. The dyspnœa causes her great alarm, and makes her frequently start up in bed and call for assistance.

She died suddenly on the night of the 5th February, as I understood from the nurse, in a fit of dyspnœa, before assistance could be procured.

Post mortem examination.—On opening the chest, the heart and pericardium were found to be natural. An aneurismal tumour was discovered arising from the descending portion of the arch of the aorta, where it is in contact with the left bronchial tube, and stretching across the vertebræ to the right side. The œsophagus ran directly in front of of the tumour, separating it from the bifurcation of the trachea. At the junction of the transverse with the descending portion of the aorta, a smaller aneurism, large enough to contain a bean, extended behind, and pressed upon the left bronchial tube, between it and the œsophagus, and communicated with the aorta by a well defined opening. The larger tumour rested upon the bodies of the third and fourth dorsal vertebræ; the osseous portion of which was absorbed, leaving the intervertebral substance prominent. This portion of the spine formed the posterior wall of the sac, the pressure of which had somewhat flattened the right bronchial tube. The sac communicated with the aorta by a well defined opening, large enough to admit a man's thumb. Its interior was lined with a firm, fleshy-looking coagulum, and did not appear to contain much recently coagulated blood. Its size was about that of a small orange, and the walls were perfect.

CASE III.—*Aneurism of the Thoracic Aorta.—Sudden Death from Rupture of the Sac into the left Bronchial Tube.*

This case was first diagnosed by Dr. Wm. Stokes, at the Meath Hospital. The accuracy of his examination will be best perceived by reading the following note, which was taken when the aneurism must have been in a very incipient state, and is on that account very valuable. The case is also interesting, because the same physical signs were discovered at the Richmond Hospital, House of Industry, where, previous to the man's death, he was examined by myself and Mr. M'Dowell, whose patient he became, and both of us were satisfied as to the existence of the disease. I shall first, by Dr. Stokes' permission, insert his note of the symptoms, and afterwards that of Mr. M'Dowell, which was copied for me by Mr. Mayne, who, with Mr. Cumming, one of the pupils of the Richmond Hospital, diligently observed the progress of the case. The

following is Dr. Stokes' account of the examination of the case, with the diagnosis he made at the time.

Suspected Aneurism of the Arch of the Aorta.

Michael Hughes, a butler, ætat. 38, a stout, well-made man, was admitted into the Meath Hospital, complaining of great dyspnœa, cough and wandering pains about the back and chest. The whole of the chest sounds clear on percussion. Respiration in the right lung intensely puerile, altogether absent in the superior portion of the left, and only feebly audible in the interior portion. On applying the stethoscope to the left axillary region, and the patient being desired to draw in a deep breath, no sound is heard during the first half of inspiration, but during the latter half the air appears to overcome some obstruction to its entrance, and suddenly rushes in to expand the lungs. The left side of the chest is almost immovable during respiration, but the right acts freely. On applying the hand to the upper part of the left side, no vibration of the voice could be detected. The vibration is very feeble below on the the same side, but well marked on the right side; impulse and sounds of the heart natural; a strong, double pulsation is heard over the sub-clavicular region of the left side, also over the postero-superior portion of the same side, and on applying the hand over the former situation a distinct impulse is communicated to it; no bruit de soufflet could be detected. The cough is loud and ringing, and of a peculiar croupy character; expectoration scanty, consisting of frothy mucus; respiration hurried. Pulse 86, and moderately full; tongue clean, appetite good; never had any difficulty in swallowing, or pain in the throat. He attributes his complaint to cold caught five months ago from sleeping in a damp pantry, shortly after which he became affected with perspirations, wandering pains in the back and sides, increased upon exertion, and attended with some dyspnœa. The pain in the back he describes as being of a lancinating character, resembling that which would be inflicted by a knife. The distress of breathing increased, with inability to use any violent exertion, and after some time was attended by a loud dry cough. The treatment since he entered the hospital has consisted chiefly in local depletion, together with small doses of tinct. digitalis.

May 2nd.—A strong double pulsation is now heard across to the right clavicle; the pulsation has increased in the sub-clavicular region, and also over the scapula, with a strong impulse below the middle third of the clavicle; after the patient walking several times up and down the ward, a sharp, well-marked bruit de scie was detected in the latter situation. It disappears, however, after the patient has remained quiet for a short time, and again returns after exercise.

I shall now insert the report of the physical signs taken from the case book of Mr. M'Dowell, at the Richmond Hospital.

Anteriorly the right side of the thorax sounds well on percussion; a little dullness in the sub-clavicular and mammary region of the left side;

respiration in the right lung remarkably loud and clear, very obscure in the left lung, except on taking a deep inspiration, which produces a feeble vesicular murmur. A strong impulse communicated to the stethoscope, two inches below the clavicle, and about an inch and a half to the left of the median line of the sternum; impulse also perceptible across the sternum to the right clavicle; it is greater than that of the heart, and appears to be double; it is also perceptible to the hand. A slight impulse communicated to the stethoscope at the left side of the second and third dorsal vertebræ; no bruit de soufflet could be detected in this situation, nor anteriorly except after great exertion; pain on percussion of the upper third of the sternum, and in the situation of the vertebræ above mentioned. His general symptoms are severe cough of a shrill, croupy character, attended with copious frothy and purulent expectoration. Excruciating pains of a lancinating character, extending from the superior part of the chest, in various directions; urgent dyspnœa, and copious perspirations, confined to the head and chest; does not complain of difficulty of swallowing; the jugular vein of left side distended; pulse in both wrists the same; does not complain of numbness in his arms, nor is there any œdema of the upper extremities; impulse and sounds of the heart natural. These symptoms increased progressively, for which he was occasionally bled, and put under the influence of digitalis, with counter-irritants. Nothing, however, appeared to give him decided relief, and he expired suddenly one night during a fit of coughing; at the same time spitting up a quantity of blood.

On dissection an aneurismal tumour was found arising from the descending portion of the aorta, and pressing upon the left bronchial tube, which was considerably indented and narrowed. The posterior wall of the sac was made up by the bodies of the second and third dorsal vertebræ, the osseous portion of which was absorbed, and presented nearly the same appearances as in the case last detailed. The interior of the sac was lined with a fibrous coagulum, and it opened into the left bronchial tube; the œsophagus was slightly pushed to the left side; the interior of the aorta was crowded with antheromatous depositions between the internal and middle coat; the heart and pericardium were natural.

On examining these cases, it will be perceived that there were some symptoms common to them all. The first I shall consider is the remarkable difference in the respiration of the two lungs, and I am the more anxious to call attention to this fact, from its having been much insisted on as an additional means of assisting our diagnosis in this disease, in a valuable paper on the pathology and diagnosis of aneurism, by Dr. Wm. Stokes, in the fifth volume of the Dublin Medical Journal.

The value of the sign, according to Dr. Stokes, consists in this, that the absence of respiration cannot be accounted for by any lesion of the lung, discoverable by auscultation or percussion. The fact of there

being a clear sound on percussion, and at the same time a feebleness of the respiration, naturally leading to the conclusion that some impediment must exist to the entrance of the air into the lung on inspiration. He also suggests that perhaps it may be found, from further observations, that a solid tumour pressing on the bronchial tube will produce a permanent feebleness of respiration, but that an aneurismal tumour may allow of the occasional reappearance of it, according to the variable nature of the contents of the sac. I could not perceive, however, in any of the cases above mentioned, that this latter phenomenon took place, but I found the fact of a feeble respiratory murmur, combined with a forcible entrance of the air into the bronchial tube on deep inspiration, of great assistance in forming a diagnosis. The only case I have met with of a solid tumour compressing the trachea, or its divisions, was that of a woman named Mary White, who was admitted into one of the chronic wards of the Whitworth Hospital, for acute bronchitis. The general symptoms of this affection were strongly marked; and the clearest evidence of it obtained by percussion and auscultation. She was treated by bleeding, which it was necessary to resort to several times, and put under the influence of tartar emetic. This treatment gave her decided relief; but the symptoms uniformly returned with the same violence upon discontinuance of the treatment. This led me to examine the chest with great attention; I suspected an aneurismal tumour might be the cause of the great dyspnœa, and recurring cough, but after several examinations, I could not satisfy myself as to the existence of this affection; no appreciable difference in the respiration of the two lungs could be discovered, nor was there an anormal pulsation in any part of the chest. The bronchial râles were intensely loud; the dyspnœa, notwithstanding every attempt to relieve her, increased in frequency and severity, and she expired one night in the act of rising from bed, apparently with a design of seeking relief from an upright posture.

On dissection I found an enlarged bronchial gland about the size of a large walnut, just in the bifurcation of the trachea, and adhering to it. It was filled with osseous and caseous deposites, similar to those mentioned by Mr. Carswell and other pathologists; scrofulous matter was found in the right bronchial tube, but there was reason to suppose it had escaped from the tumour, by an incision accidentally made in examining the parts. The dyspnœa in this case could not have arisen from the pressure of the tumour on the bronchial tubes, as their natural calibre was not in any way altered. It is more reasonable to ascribe it to the irritation of the nerves, particularly of the phrenic, which was in close contact with the sharp spiculæ of bone, with which the tumour was studded. These nerves are accurately shown in the preparation of the tumour, and were carefully dissected by Mr. Robert Smith, curator of the museum of the Richmond Hospital. It would have been interesting to have observed in this case whether the dyspnœa would have increased,

as it almost invariably does in the case of aneurism, on making the patient walk quickly, so as to increase the circulation, and thus produce a distension of the sac, but being persuaded of the non-existence of that disease, I did not resort to this expedient. The bronchial tubes presented through their entire extent marks of intense inflammation.

In the two last cases of aneurism, the effects of the pressure of the tumours on the left bronchial tube are shown in the plates accompanying this paper, and in the case of Hughes in particular, it will be seen by an inspection of the drawing, how, in the act of inspiration, the air rushed through the tube in the manner described by Dr. Stokes. When I examined this man, I did not detect the phenomenon of the inspired air appearing to overcome an obstacle, but considerable changes must have occurred in the sac since the time the disease was first discovered. Notwithstanding this circumstance, I have no doubt that had my attention been directed to the sign in question, I might have detected it, but as it was, great feebleness of respiration was what I observed.

In the case of Lee, the compression of the tube was not so obvious, as it was produced by the smaller tumour, which requires a manual examination of the preparation, to be seen properly, and could not be well delineated in the drawing. This smaller tumour pressed the œsophagus against the left bronchial tube, and hence produced the great dysphagia. From its position, also, it must have nearly prevented the ingress of air into the left lung. In the first case the left bronchial tube was also compressed, and the respiration of that lung consequently feeble; but as I did not suspect the existence of the second aneurism, I neglected to examine the postero-inferior portion of the lung, with the same accuracy I would otherwise have done, and consequently cannot state what modification of the respiration took place in consequence of its pressure on the lung.

In alluding to this sign, it is not meant to be inferred by Dr. Stokes; that it will be found to be pathognomonic of the disease in question, as it may be produced by other tumours besides those of aneurism; but it becomes important when occurring with the other symptoms of the affection, both general and physical. It is clear, also, that an aneurism may be developed in the inferior descending portion of the aorta, where we would be altogether deprived of this sign. From studying the anatomy of this vessel, so accurately described by Professor Harrison,* it will be seen, that a long portion of it, from about the third dorsal vertebra to its entrance into the abdominal cavity, is unconnected with the primary divisions of the trachea, and hence, whatever modifications in the function of respiration may be produced from pressure of the tube, must be sought for in the portion of the lung inferior to these divisions.

The next sign I shall consider as having occurred in these cases, is the

* Harrison on the Surgical Anatomy of the Arteries, third edition.

fact of an anormal pulsation in the interior of the chest. It will be recollected that Laennec did not place much reliance on this symptom, except when it occurred under the form of a strong single impulse. Several circumstances, however, may prevent us from perceiving this single impulse, when the chest is examined anteriorly. The proximity of the tumour, for instance, to the heart, as at the origin of the aorta, will necessarily render the occurrence of this phenomenon less available for diagnosis, from the contiguity of the impulse of that organ. Again, should the tumour be situated at the descending portion of the aorta, its impulse will be masked by that of the heart which lies before it. These difficulties will be increased in hypertrophy of the organ; notwithstanding these obscurities, however, the sign alluded to is a most important one. It has been remarked by Dr. Hope, that when this phenomenon occurs posteriorly, particularly when accompanied with a sound of a rasping character, it is almost a positive indication of the development of aneurism, and I found this phenomenon to be well marked, particularly in the case of Lee. The sounds accompanying this impulse appear to be susceptible of great variation, owing in all probability to the depositions which take place in the interior of the sac, or to the variations of its aperture which occur in the progress of the disease, influenced, also, by the greater or lesser velocity of the circulation at different times.

That two sounds may be heard in an aneurismal tumour I can have no doubt, from my own observations and those of others. The causes of these sounds are not yet fully understood. From the experiments of Magendie,* it would appear that sounds of different intensity may be produced by the forcible injection of fluids through tubes of different calibres, and may be still further modified by pressure exercised on their exterior. Whether in the case of the aneurismal sac, two sounds may be produced by the action of the parietes of the tumour itself on its fluid contents, requires the admission of a degree of elasticity in these parietes, which, perhaps, we are not authorized to assume in the present state of our knowledge. The subject, however, is well worthy of consideration. Elasticity, we should recollect, is one of the physical properties of all organized matter; and we have no *certain* grounds for supposing that the walls of a *false* aneurism are deprived of it. In order to clear up this point, it would be useful to examine aneurisms occurring at a distance from the centre of the circulation, as for instance, popliteal aneurisms. If in these cases a double sound could be clearly heard, it would not only throw light upon this subject, but might also be urged as an objection to the theory recently adopted by Magendie† to explain the sounds of the heart, as we can scarcely conceive any analogy between

* Lectures in the Lancet, 1835. † Ibid.

the physical conditions which this distinguished physiologist states are necessary for the sounds of this organ, and those that we find in the case alluded to. As I have not been able, however, since I thought of this subject, to examine a case of an aneurism in the extremities, I am at present obliged to confine myself to conjecture.

It will be perceived by reading these cases, that no assistance was obtained by the aid of percussion. This must necessarily be the case whenever the tumour is situated in contact with the vertebral column, and has not attained any considerable size; under such circumstances, and if the lungs are healthy, a clear sound will be obtained anteriorly, and whatever dullness is perceptible posteriorly, may be with reason attributed to the column itself. When, on the other hand, the tumour has reached such a size as will necessarily induce dullness on percussion, the disease will, in all probability, be evidenced by other and more remarkable phenomena. This observation will also apply to aneurismal tumours of the thorax in their incipient state wherever situated, but is more obvious in the instance alluded to.

In the second case, a purring tremour in the situation of the impulse posteriorly was very perceptible, when the ball of the thumb was pressed firmly down on the tumour, and could not be detected in any other part of the chest. It was perceptible when the respiration was discontinued. This sign, however, was not so remarkable in the other cases; and we know that it does not necessarily accompany the development of aneurisms in all stages of their increase. It ought, however, to be taken into account, when it occurs at a distance from the heart, and can be proved to be unconnected with any lesions of the respiratory function, or with a disease of the heart.

With reference to those symptoms which, in the language of systematic writers, are called "general," many differences must of course occur, according to the situation which the sac occupies. It will be observed, for instance, that in those cases no assistance was derived from a difference in the radial pulsations, or from numbness or œdema of the upper extremities. The absence of these symptoms, whenever the physical signs of an aneurism are strongly marked, may, perhaps, lead us with more certainty to a knowledge of the part of the vessel which the disease occupies, and also to the progress it is making. This is so obvious from considering the anatomy of the aorta, that I need not here make any lengthened observations upon it. In fact, when we have the physical signs above adverted to, and those general symptoms absent, we must infer that the tumour is below the origin of the great vessels going to the head and upper extremities; and if, in the course of the disease they make their appearance, we may infer that the sac is expanding upwards, and exercising a pressure on them. The same observation will apply to the absence of numbness and œdema of the upper extremities.

The violent paroxysms of dyspnœa was one of the most remarkable circumstances attending these cases, but when we reflect on the number of sources from which this symptom will arise, we must see how uncertain it is, when taken by itself, to indicate the existence of an aneurism. That in the disease in question, other circumstances, besides the mere pressure of the tumour on the bronchial tube, concur to its production, appears to be evident from several considerations. I have already detailed a case where a violent and almost uncontrollable dyspnœa arose from the contact of a solid tumour, without producing any diminution of the calibre of the tube, at least none that was appreciable from examination after death. The occurrence of dyspnœa has been particularly adverted to by Dr. Graves, in one of his Clinical Lectures,* when treating of aneurisms in the thoracic cavity. Among many original observations upon this point, Dr. Graves remarks, that independently of the sensation of distress which arises from a portion of the lung being deprived of air, owing to the narrowness or obliteration of the tube going to it from pressure, other causes may be assigned for the dyspnœa and pulmonary irritation. He conceives that in such a case a portion of the lung undergoes changes analogous to those of the whole lung in the case of asphyxia; in this instance the blood from the right side of the heart ceases to be properly aerated, and stagnating in the lung, renders it engorged, and hence the secretions and exhalations are altered and unnatural, from whence arise, in addition to dyspnœa, irritation, cough, and expectoration. This reasoning, which appears difficult to disprove, may be applied to account for the constantly increasing pulmonary irritation which was observed in some of the cases I have mentioned, particularly in the last, where the expectoration in the end was decidedly purulent. We must not, however, neglect to take into account, as I have just observed, the many other causes of this phenomenon. That it depended in the case I have mentioned of the woman White, on the irritation of the nerves which surrounded the tumour, will, I think, be evident from considering the effects which follow the mechanical irritation of the nerves going to any particular muscle. We know that in such an instance spasms of greater or lesser violence will be the necessary consequence; and applying this reflection to the case under consideration, it will not be difficult to perceive, that the irritation of an osseous spicula on the phrenic nerve must have produced violent spasms of the diaphragm. If we adopt, with some physiologists, the opinion, that the bronchial tubes and the lungs themselves are endowed with contractile properties, the irritation of the nerves composing the pulmonic plexus would still further have aggravated the dyspnœa. Per-

* Dr. Graves' Clinical Lectures,—Renshaw's Medical and Surgical Journal, Lecture 5th.

haps we might extend this explanation to account for the violent dyspnœa which is often one of the earliest symptoms of aneurisms in the thoracic cavity, recollecting that every deposite in the coats of the aorta, particularly an osseous one, will prove a source of irritation to the nerves with which it may be in contact; but these deposites most frequently precede the development of the disease.

The difficulty of swallowing is more likely to be experienced in those cases where the disease occupies the transverse and descending portion of the arch, than elsewhere. In this situation the œsophagus is more fixed, as it were, than in any other portion of its course, except where it passes through the diaphragm. From its comparative mobility, in the upper and lower portion of its course, it may in a great measure elude, for a considerable time, the pressure of the tumour. When this symptom does occur, it only becomes valuable when taken in conjunction with the physical signs, and of course cannot be relied upon if it occurs as an isolated phenomenon. The importance, in such a case, of being able to ascertain its dependence on the pressure of an aneurismal tumour, is obvious from the fact of probangs having been passed down in this disease, under the supposition that the stricture was unconnected with it.

Among the general symptoms, turgescence of the left jugular, in particular, is usually alluded to by authors. This symptom occurred in the three cases I have given; but as the tumour in each of them was at a considerable distance below the vena innominata, I am somewhat at a loss to conceive how their pressure could have influenced the circulation of the blood through it. The idea that suggests itself to me is, that the tumours might have produced an impediment to the aortal circulation, by which the arch would be over-distended, and would hence in its turn produce a pressure on the vena innominata. Should this supposition prove to be well-founded, we might have this symptom, although the aneurism were situated at a considerable distance from the vein.

The result then of these cases, together with those already published, particularly by Dr. Stokes* and Bertin,† proves that we are in possession of a number of physical signs, which, when attentively studied in connection with the general symptoms, will lead us to a knowledge of this obscure disease, even before it has made any considerable progress. The necessity of taking every phenomenon into consideration, is obvious. We should recollect that our diagnosis ought never to be founded on one or two, but on a series of observations, carefully noted and compared with each other.

I have before mentioned that there is a portion of the aorta where some of those signs must necessarily be absent. As far as the different

* Dublin Medical and Surgical Journal, vol. v.

† Observations 37 and 38, Maladies du Cœur.

portions of the arch of the aorta are concerned, the diagnosis of aneurism of the vessel may be said to be in a great measure rescued from the obscurity in which it was formerly involved, and for which we are much indebted, amongst others, to the observations of Dr. Stokes. But when we come to consider the signs and symptoms we are able to collect when it occurs in the remainder of its course in the thorax, we find that they are diminished in number, and are often so feebly characterized, as to escape our notice. It may be superfluous, perhaps, to give an example in proof of this assertion, when so many are already on record. The following case, however, which occurred at the Whitworth Hospital, is so much in point that I will here mention it. The case was taken by Mr. Mayne, who was clinical clerk at the time the man entered the Hospital. I had not myself an opportunity of examining the patient. I shall give a very condensed account of it from the notes furnished to me by Mr. Mayne.

Laurence Duffy, aged 43, admitted 12th July, 1833, states he had been healthy all his life, until about nine months previous to his admission, when he began to experience a difficulty in swallowing, the increase of which induced him to apply for assistance. When questioned, he complained of difficulty in swallowing, which he referred to the centre of the sternum, where the effort was attended with pain followed by vomiting. Fluids passed down without difficulty; his bowels were constipated; the chest sounded well throughout; the respiration over its entire extent was perfectly natural. His bowels were freed by a calomel bolus, and purgative mixture. A slight cough, which he had on his entrance, altogether disappeared for seven days after his admission, and no symptom whatever was complained of, but the dysphagia. He died suddenly on the night of the seventh day from his admission.

On dissection an aneurism was found corresponding to the fifth and sixth dorsal vertebræ, about the size of an orange, and it had burst into the right pleura. The tumour had slightly bent the œsophagus, which formed a curve, the concavity towards the sac.

Here then is an instance where, if we were to rely on the general signs, we should have had but one to excite our suspicions of the disease; and this should lead us, in all cases of long-continued dysphagia, to institute an accurate examination for the physical signs of aneurism. A question then naturally arises; what are we to expect from such an examination, when an aneurism exists in this situation? It will be obvious that when the mouth of the sac is situated below the fourth dorsal vertebra, we cannot expect to find the same modifications of the respiration as those above mentioned. I mean this remark to apply to the incipient stage of the disease, for when it is considerably advanced, the expansion of the sac upwards may of course produce pressure on either of the bronchial tubes, but even such an occurrence could not happen for

a considerable length of time, when the tumour is situated opposite the eighth or tenth dorsal vertebra. It might perhaps be important to observe in such a case, whether the patient complained of pain on deep inspiration at the postero-inferior portion of the lung, or whether pains resembling those of pleurisy exist about this situation, for if the sac should contract adhesions to the pleura, it might not be unreasonable to expect pains similar to those that precede the advance of tubercles to the surface of the lung. When the sac has so far increased as to produce an absence of respiration in any considerable portion of the lung, the nature of the case will be in all probability apparent from other symptoms.

On reflecting upon the symptoms which would attend an aneurism so low down in the thorax, I at first imagined, that if the tumour produced an impediment to the aortal circulation, we might be able to ascertain it by the feeble impulse of the abdominal aorta, when the stethoscope was pressed firmly down upon it, some way above the umbilicus, but on considering the cases that have been published of obliteration or contraction of this vessel, I am not inclined to suppose that this phenomenon would exist. Many cases of such a change in the artery, as I have mentioned, are now on record. The latest published is in an interesting communication from Mr. Nixon, in the fifth volume of the Dublin Medical Journal, where copious references are made to those previously noticed. From examining the plates which illustrate these contractions of the vessel, it will be seen that the aorta immediately below the constriction is abundantly supplied by collateral vessels, and no perceptible diminution of the calibre of the tube can be recognized. It is remarkable that this phenomenon has occurred in so many cases, near the situation of the ductus arteriosus, and it may become a question for further consideration, whether the process established by nature for the closure of that tube at birth, may not be extended to the aorta in its vicinity, and thus constitute either a congenital malformation, or establish a predisposition to aneurism in this part of the vessel.

The collateral circulation, I have alluded to, is attended with such an enlargement of the vessels that carry it on, that I was in hopes we might be led to infer the existence of the stricture, by attending to the increased pulsations in these arteries; but unfortunately, they are so numerous and deeply seated, as to be without the reach of any means we can apply to discover their pulsations. In all probability, also, should the closure occur from the pressure of an aneurism, these changes in the collateral vessels will be a gradual process, so that no sudden diminution of the pulsation of the vessel could be discovered below the stricture. The principal alterations that occur in these cases, are in the intercostal arteries, and their anastomosis with the mammary, &c. as is well seen in a plate in Meckel's Archives, 1827. The case of constriction, published

by Meckel, occurred about the situation of the ductus arteriosus. It was accidentally discovered in the body of a patient, who died at Bonn, but of whose previous history nothing could be ascertained. In the plate which illustrates this lesion, and for the inspection of which I am indebted to Dr. Graves, who directed my attention to the case, these arteries are seen remarkably developed and tortuous, but as I have just observed, they would be too deep from the surface to enable us to recognize their pulsations during life.

In concluding these remarks, I would wish to direct attention to the obscurity which still attends the diagnosis of aneurism of the inferior descending portion of the aorta, an obscurity which does not attach in so great a degree to aneurisms of the different portions of the arch. Since I have entered on the investigation of this subject, I have not been able to examine a case of the disease in this situation, but it is not improbable that those who have, will be enabled by their observations to elucidate this interesting point of pathology.

As far as I am at present enabled to offer an opinion, the principal symptoms and physical signs on which I would be inclined to diagnose the existence of an aneurism in the situation I have just mentioned, would be as follows:

1st. An impulse limited in extent, and decreasing in intensity as the stethoscope is applied above or below the situation of the suspected tumour. This sign is more valuable, if it occurs on the right side of the spinal column, which is not the situation, anatomically speaking, where an impulse should be perceived.

2d. A bruit de soufflet or a bruit de râpe, heard in the suspected tumour, and not observable in any other considerable portion of the aorta or in the heart. It is necessary in every instance to examine the heart, for within these few days, I have met with a case, in the Whitworth Hospital, where a loud bruit de râpe accompanies the second sound of the heart, this bruit is heard down the spine along the course of the aorta. It is heard also in the carotid and brachial arteries, even to the elbow-joint. I have satisfied myself that in this case a double sound is heard in these arteries. The name of the individual in whom these phenomena occur, is William Connor, and several of the class of the Whitworth Hospital have heard both the bruit and the sound in the situations mentioned.

3d. The production of pain on pressing the vertebral column over the site of the impulse.

4th. The production of pain referred to a portion of the lung near the situation of the impulse, on a forcible inspiration.

5th. Dysphagia referred to some point below the middle third of the sternum, or to a point nearly opposite the impulse.

Lastly, it may be worth while to contrast the pulsations of the abdo-

minal aorta in the epigastrium, with other arteries and with the impulse of the heart.

We should take into consideration also (provided the above signs are well marked) the evidence we may obtain with respect to the position of the tumour from the absence of some symptoms: such for instance as the non-existence of a laryngeal croupy cough; difference of pulsation in the two radial arteries; or numbness or œdema of the upper extremities.

I regret that the time afforded for getting this paper ready for the present number of the Journal, is not sufficient to enable me to consider this subject more at large. As, however, I have had no opportunity of studying the phenomena attendant on an aneurism in the part of the thoracic aorta to which I wish to draw attention, I feel it more prudent to reserve any further observations for a future opportunity. I am sensible of having left much concerning this interesting subject as yet untouched, but in giving the cases above detailed, I shall be satisfied if they tend to strengthen our confidence in the diagnosis we are able to arrive at, by the additional aid of auscultation. The publication of such cases is the more necessary, from considering the doubtful terms in which Laennec expressed himself concerning the value of the stethoscope, as applied to the diagnosis of the disease in question. We should, however, recollect, that the obscurity which the brilliancy of one mind is unable to dissipate, may be cleared up by the labours of many, and that the contributions of individuals for this purpose are, in the language of Abernethy, "like lights shining from many quarters."

[*Dublin Journal, May*, 1835.

REVIEW.

Admonere voluimus, non mordere.——
Sunt bona; sunt quædam mediocria, sunt mala plura.

Surgical Anatomy of the Arteries, with plates and illustrations. By NATHAN R. SMITH, M.D. Professor of Surgery in the University of Maryland, and one of the Surgeons to the Baltimore Infirmary. Second edition, greatly improved. 4to, Baltimore, 1835, Lucas & Wight.

WE are irresistibly led to inquire, why a work of such intrinsic merit and extended usefulness as that before us, should have remained thus long unnoticed by the medical journals of our country? Why is it, that the American reader must refer to the Medico-Chirurgical Review, to learn that within the immediate precincts of his own fireside, is to be found a work inferior to none upon the subject of which it treats, and offering to the practitioner, information,—the loss of which, for a single moment, may involve him in perplexity and difficulty? The utility of the work will not be denied, when we reflect upon the accidents incident to man, which involve important blood-vessels, and demand the prompt and judicious attention of the nearest physician. That Dr. S. has performed the task with ability, will be admitted by every candid and impartial reader: why is it then, that five years should have rolled by, and the medical community be kept ignorant of the existence of such a work? We do not pretend to answer these queries, but are prone to believe, that had it been the issue of some favourite and prolific press, its merits would not have been overlooked.

The work comprises two parts. The first embraces the general anatomy, physiology, and pathology of the arteries. After giving a general view of the arterial distribution, and its ultimate termination in radicles, inosculating with each other; 2d, in exhalent terminations; 3d, capillary twigs, inosculating with the ultimate venous ramifications; the doctor describes minutely the character and arrangement of the coats which form the vessels. The second section, devoted to the functions of the arteries, is occupied with the discussion of the question, (so long agitated,) in reference to the part which the arterial tubes take in the circulation of the blood. Although there are those who contend that the arteries are passive sanguiducts, and that the heart is the sole propellant organ; yet the number is comparatively small, for the every day's

experience of the profession is furnishing the most conclusive evidence of the entire independence of the capillary system. Indeed, the symmetrical and beautiful structure of modern pathology, assumes for its foundation the correctness of this position; for if the capillary circulation was, (under every circumstance,) dependant upon the heart's action, there could not be a local irritation or abnormal circulation in any part of the capillary system, without referring its origin to irregularity in the heart's action. In addition to the arguments and facts usually adduced to sustain the active state of the arterial vessels, Dr. Smith has advanced several cases which occurred under his own observation, one of which is subjoined.

"Some years ago, I had occasion to apply a ligature to the anterior tibial artery, that organ having been wounded by a narrow cutting instrument, below the middle of the left leg. I was assisted by Dr. Jamin Hamilton, who, with myself, noticed the following facts. The ligature having been applied above the wound, the bleeding immediately ceased. At the end of a few hours, however, it returned, and the blood evidently flowed in the retrograde direction from the inferior portion of the wounded artery. On applying the finger to the anterior tibial artery, on the tarsus, it was found actively beating. Presuming that the course of the blood was recurrent, I applied one finger upon the artery, just where it merges itself between the metatarsal bones—another higher up, on the tarsus. When I pressed firmly with the lower finger, no pulsation was felt by the other, but when I pressed with the upper, the artery still beat below. Although this artery received no blood but through anastomosing branches, and consequently was greatly protected from the vis-a-tergo of the heart, yet it beat with far more force than the corresponding artery in the other foot. It should be remarked that the left leg, near the wound, was under high inflammatory excitement. The increased action of the artery, then, must have been owing, not to the impulse of the blood from the heart, but to the vis-insita of its own coats, and of the capillary vessels communicating with it. It is in vain to say that the blood, finding its way into the artery by the anastomosing branches, was unable to escape freely in consequence of the obstructions at the wound, and thus distended the artery. The artery seemed to empty itself freely between the beats, and could then be scarcely felt; besides, blood, it is known, will not so freely seek vessels which are thus obstructed." p. 13.

The variable state of the pulse under disease, would strongly indicate the independence of the arterial vessels; for it appears conclusive, that if the heart was alone the agent of circulation, and the vessels merely passive tubes, no alteration of the heart's condition would present us with the phenomena so strikingly prominent, in the various forms of organic lesion; for although the strong and full pulse, the frequent pulse, the quick pulse, the weak pulse, the intermitting pulse, &c. may

be attributable to irregularities in the heart's action, yet the small, corded, wiry pulse, or the soft, dilated pulse, is equally referrible to the condition of the arterial coats, and independent of the heart. Even those who contend for the dependence of the capillary vessels, admit that the vessels may become debilitated and relaxed, and thereby permit the vis-a-tergo of the heart to propel the blood into and thus distend them. Now if this is admitted, our author contends that all that is asked is promptly conceded; for a power of relaxation presupposes a power of contractility, and cannot occur in an elastic texture.

When we revert to the anatomical arrangement of the arterial vessels, and discover that as we proceed from the heart, the division into branches is not always in a direct ratio to the calibre of the main trunk, but that the branches united, present us with an increase in capacity, we at once perceive the total insufficiency of the vis-a-tergo to keep up a circulation; for if the heart was the sole propellant power, its action or in other words, the contraction of the left ventricle must drive the fluid onward to the extreme point of the vascular system. If this was the actual state of things, we should doubtless have perceived an entirely different arrangement of the arterial system, and instead of the capacity increasing as we advance toward the extremity of the circulation, we should discover a mechanical provision for the propulsion of the blood, by the converse of the present distribution. In the erectile textures we have the circulation undergoing constant mutations; and will it be said, that this local variation is owing to the peculiar action of the heart? Can it be urged that the heart has, by some inexplicable intelligence, recognized the demand made at this point, and by some mysterious agency, has so modified its energy and action as to direct the mass of circulating fluid to these erectile tissues? Is the mere yielding of vessels to the vis-a-tergo of the heart sufficient to account for this engorgement of textures; or is it not more consistent with the phenomena of vitality to look to the active contractility of the capillaries for the solution of the difficulty? If sulphuric ether be applied to the skin and evaporation prevented, the increased action of the capillaries is speedily recognized by the redness; in this case, the disturbance is evidently local, and confined to the point to which the application is made, and so far from disturbing the balance of the heart's action, the surrounding capillaries themselves are not affected. Dr. S. believes that this active contractility of the coats of the capillary vessels, not only urges on the circulating fluid thrown upon them, by the adjacent arterial vessels, but enables them to draw or pump into them a supply of blood with great rapidity, from the main branches of the arteries.

"The morbid congeries of vessels, denominated aneurism-by-anastomosis, furnish facts in support of the same position. When the surgeon, extirpating these tumours, cuts widely around their base, incising only the healthy parts, there is but little more bleeding than in the extir-

pation of ordinary sarcoma; but if he incautiously wounds the bundle of diseased vessels, there occurs a furious gush of blood, extremely difficult to control. It would seem then, that these vessels have the power of soliciting forward the current of blood through the nutrient arteries of the tumour, much faster than it is driven by the mere impulse of the heart." p. 14.

The contractility of the arterial coats is farther sustained by comparative anatomy; for instance, in some animals we have a single heart, composed of an auricle and ventricle; from the latter we have the aortal trunk passing off and dividing into a number of branches, which go directly to the gills and form the branchial arches, and while ramifying through these organs, the venous blood is converted into arterial, which is returned to the aorta or true systemic artery, by a set of vessels arising at the extremities of the last mentioned, by which it is circulated through the system. Thus we perceive that the heart's action can at most, only send the blood to the extremity of the branchial system, from which, by the action of a set of vessels, arising at the termination of the last, and certainly independent of the heart, it is sent to the principal trunk of the arterial system, (aorta,) by the contractility of whose coats it is urged onward in the round of circulation. The subjoined paragraph presents the views of our author in reference to the part which each organ of the circulating apparatus performs, in the propulsion of the blood through the organism.

"The facts and reasoning which we have stated above will justify the inference, that the more active agents of the circulation are at the two extremes of the arterial system—the heart at one extremity and the capillaries at the other; that the common trunk of the arteries co-operate in the circulation by the re-action of its elasticity; that the minor arteries exercise an obscure contractility, and that the capillary vessels exercise a degree of motive power, by which they not only urge the blood along their own tubes and into the veins, but by a kind of suction, drive it from the larger arteries, and hurry its current along these vessels." p. 14.

We cheerfully accord to the fact stated above, that the agents at the two extremes of the circulation exert a powerful influence in the propulsion of the blood, yet we are disposed to believe the arterial tubes themselves exercise an influence greater than that ascribed to them, which Dr. S. presumes to be merely owing to the elasticity of their coats; for if we deny them active contractility, then the phenomena alluded to before, viz. the wiry, corded pulse, &c. is altogether unaccounted for.

In the report of the proceedings of the French Academy of Sciences, for April 15th, 1833, we discover that Dr. Tanchou advances views somewhat similar to the above in reference to the capillary circulation. He contends that there is constantly a tendency to the formation of a

vacuum by the withdrawal of the constituents of the blood, during the process of secretion, and accordingly there is a steady and uniform afflux or suction of blood to all parts of the body. While this view renders the capillaries independent of the general circulation, and sustains the opinion of a constant imbibition or suction exerted by the capillaries, it differs from our author's views, by depriving the capillaries of a direct and active contractility, and refers the phenomena of this circulation to an established law of hydraulics.

On the subject of the spontaneous cessation of hemorrhage from wounded arteries, although of vital importance to mankind, but little has been added to our stock of knowledge since the experiments of Jones, to ascertain the means employed by nature to arrest the hemorrhage, and to what extent this power was possessed. His experiments induced him to infer that wounds of the larger arteries, unless the injury be peculiar, were inevitably fatal. The process pursued by nature with the smaller vessels consists in the contraction of the vessel, by which its calibre is diminished, and its retracting and drawing its extremity within the cellular coat, the loss of blood at the same time diminishing the activity of the circulation. By the retraction of the extremity, the blood flows into the sheath, and thus deposites a coagulum, layer after layer, until the artery is completely blocked up, preventing the escape of blood from the artery, and arresting it at its termination, by enabling the stagnant fluid to coagulate, and form a plug within the extremity of the wounded vessel. The internal coagulum being less than the calibre of the artery, the powers of life institute a reparative process, by depositing lymph between the coats of the vessel and within its orifice, between the coagulum and the internal coat. The ingenuity of man in every age has been exerted for the purpose of discovering some composition, which, by its chemical properties, might prove to be a perfect styptic. Within a few years past M. M. Talrich and Talmagrand have announced to the profession, a "liquide hæmostatique," which, by its composition, is calculated to arrest hemorrhage from any vessel, however large Upon the introduction of this new styptic into England, Mr. Cæsar Hawkins, in the presence of the inventors, executed several experiments upon animals, and clearly demonstrated that any fluid possessed equal hæmostatic powers with the new French styptic. M. M. Talrich and Talmagrand lost three out of five of these animals; Mr. Hawkins, on the other hand, without a styptic, lost two out of five. Mr. Hawkins is induced to infer, from his experiments, that when an artery is cut transversely or longitudinally, that pressure for ten minutes upon it, with compresses moistened with any fluid, will possibly arrest the hæmorrhage; that a circular aperture made in an artery, can be closed by allowing a diffused aneurism to take place in the adjacent soft parts, and that in either case, the formation of the coagulum, and subsequently the deposition of lymph, is the rationale of the healing process; but if this coagulum is imperfectly

formed, or should afterward be disturbed, hæmorrhage will ensue; and lastly, if styptics exert any influence, it is in two ways—by inducing contraction of the coats of the artery,—and by promoting coagulation; but that the "liquide hæmostatique" does not induce coagulation in a shorter time than the decoction of galls, and that in his experiments, water was equally successful. It is evident from the inferences of Mr. Hawkins, that little or no importance is to be attributed to the use of styptics; but on the contrary, the arrest of hæmorrhage, as was satisfactorily demonstrated by Jones, was dependent upon the nature of the wound, and the means which nature instituted for the reparation of the injury, viz. the contraction of the arterial coats, and the formation of a coagulum, which eventually became intimately united to the adjoining textures.

It had long since been observed, that when a limb is violently torn from the body, the arteries being lacerated, no active hæmorrhage ensued. Cheseldren, in his anatomy, had related a case, in which the arm with the scapula had been torn from the body, without the occurrence of hæmorrhage from the larger vessels, which were lacerated and dragged out. Various, indeed, were the opinions advanced by surgeons to account for this circumstance. Richerand says, that when large arteries are ruptured, they are closed partly by the chill which is produced, causing spasm, and partly by the pressure which the muscles produce when retracting. Mr. C. Bell urges the fact that the inner coat is torn into shreds, producing a valvular structure; Professor Gibson, of Philadelphia, that the injury inflicted upon the adjacent nerves, and a consequent paralysis of the artery, prevents the escape of the coagulum, which is forming at the extremity of the lacerated vessel. But to arrive at the truth, Dr. S. instituted a series of experiments, the results of which justify the following conclusions:

"1st. That Dr. Jones errs in ascribing the cessation of hæmorrhage from lacerated arteries mainly to the same causes which avail against bleeding from divided arteries. In the experiments detailed above, the retraction and contraction of the organ availed nothing. The same was true in regard to the external coagulum, which, according to Dr Jones, is the principal agent. In each of the experiments, the extremities of the vessel were rather dilated than constricted or compressed. In one instance the artery hung naked from the wound, and yet the bleeding ceased as promptly as under other circumstances.

"2d. Equally untenable is the doctrine that the artery is paralyzed by the shock inflicted upon its contractile tissue, and that the blood refuses to flow through a passive tube. In every experiment there was extensive injury inflicted upon the artery, and in one the organ was torn from the surrounding parts to a great extent; consequently its vital intercourse with them must have been for a time interrupted, and its own actions suspended. This paralysis of the artery should be most perfect instantly

after the injury; but we find that the blood then flowed in a rapid stream, which was undiminished till it had had time to coagulate. It is true, that in those cases on record, in which limbs have been torn from the body, there has been, even at the moment of the injury, no considerable bleeding. But this has undoubtedly arisen from the shock given to the general system, and the suspension of the action of the heart till the blood had coagulated in the extremity of the artery.

"3d. Although the pockets or valves mentioned by Mr. Bell, were, in one experiment, formed on the sides of the lacerated vessel by the rupture and partial detachment of the inner coat, yet, when the experiment was performed on the living animal, they were not found efficient in suppressing hæmorrhage in a single instance.

"4th. The efficient and almost only cause of the cessation of hæmorrhage from lacerated arteries, is the unequal laceration of the external and internal coats. Generally the internal coat is fractured transversely at numerous places, so as to present an indefinite number of small fissures, into which the blood of the artery is injected, and thence, perhaps, conveyed by interstitial absorption into the arterial tissues. Blood also probably flows from the ruptured tissue, and mingles with that in the cavity of the artery. As soon as coagulation begins to take place, blood concretes, probably first on the fissures produced in the internal coat, attaching itself to the rough surface which is there produced, and insinuating itself into the interstices in such a manner that the coagulum becomes so firmly fixed as to resist the impulse of the circulating blood. When an artery is smoothly cut across, and the integrity of the inner coat is uninjured, the coagulum finds no point d'appui, or roughness upon which it can take hold. The surface is every where polished and lubricated for the very purpose of facilitating the passage of the blood, and therefore the internal coagulum, as it forms, either glides from the artery, where the organ is very large, or perhaps does not form at all, the particles finding no rallying point within the vessel. But when the internal membrane is extensively ruptured, blood must necessarily concrete upon the lacerated surface, precisely as it is uniformly observed to do in other wounds." p. 24.

We cannot pass unnoticed the satisfactory conclusions arrived at, from the above mentioned experiments, and must award our unqualified approbation to Dr. S. for the careful and faithful execution of his experimental inquiry, which has resulted in a clear and uncontrovertible rationale of the process by which the hæmorrhage from lacerated arteries is eventually arrested. While this explanation satisfactorily accounts for the cessation of hæmorrhage from lacerated vessels, it also sets forth the cause of active hæmorrhage, when the artery is cut across by a sharp instrument, and demonstrates the fact, that truth in reference to physiological laws can never be attained by any process of reasoning, and is only established beyond the fear of contradiction by experiments

judiciously and carefully executed. The next section of the work is occupied with a view of the surgical means by which hæmorrhage from wounded arteries is suppressed, and their comparative merits.

The means which we employ are strictly mechanical, and accomplish their end by merely arresting the flow of blood for the time, and allowing the recuperative powers of the system to form, and eventually cement the coagulum to the walls of the wounded vessel. The agents, at present in use, are the ligature, the compress, and the cautery; recently, however, the attention of the profession has been directed to the operation styled "torsion," which consists in twisting the extremity of the vessel, until its inner and middle coats are fractured. The beneficial effects of torsion seem to be confined to the smaller vessels, although many distinguished German surgeons advocate its use on the larger arteries. But while the ligature offers such conclusive and evident proof of its safety and value, we should consider torsion in cases of injury of the large vessels, an abandonment of much safer means, and a recklessness of the well-being of the patient. It would be unfair and injudicious to examine the merits of the several surgical means recommended, by contrasting one with the other, for each has its appropriate place, and would, under certain circumstances, illustrate its utility, and perhaps its decided advantage over its neighbour; thus, to a larger vessel, when wounded and located amidst muscles or any yielding organ, we would apply the ligature; but if the vessel was situated in close proximity to a firm and unyielding organ, as, for instance, the branches of the temporal arteries, ramifying upon the cranial vault, compression would not only arrest the hæmorrhage, but should supersede the use of the ligature by its more speedy and permanent effects. On the other hand, a number of small vessels may be wounded and pour forth from their orifices the vital fluid until exhaustion is threatened, and calls for the attention of the surgeon; here, from the minuteness of the vessels, the ligature is contra-indicated, and owing to their location, compression may prove unavailing. We are then driven to the only alternative—the actual cautery. Styptics are rarely relied upon by the intelligent and judicious surgeon, and indeed from the above experiments and conclusions of Mr. Hawkins, we are led to infer, that when any styptic is used, it merely tends to divert the mind, and producing no effect, leaves the entire work to be accomplished by the efforts of the vis vitæ. Secondary hæmorrhage is liable to occur at any period after the application of the ligature; either from disease of the arterial coats, preventing adhesive inflammation;—from the mal-application of the ligature;—and from ulceration or sloughing of the tunics, caused by injury inflicted upon them, by the irritation of the thread, or by a depraved habit of body.

Dr. Smith has described an instrument for the purpose of seizing the artery, and from an examination of its construction, we are led to believe that it possesses advantages over any forceps we have ever seen. It is

so constructed as to enable the surgeon, in the absence of an assistant, to catch the wounded vessel, and by the operation of a spring applied to the inner surface of one blade, retains its hold, and by its own weight drags out the vessel, and thereby affords the surgeon the opportunity of applying his ligature. The instrument is the ordinary dissecting forceps with the blades excavated just above the points, in order that they may seize the vessel firmly, and prevent it from slipping. On the inner surface of one blade is a spring projecting and passing through a hole in the other; on this spring there is a catch, which takes hold of the blades when firmly pressed together, and keeps them snugly closed.

The remaining portion of the first part of the work is occupied with the organic diseases of the arteries;—inflammation and ulceration of their coats, and aneurism, and the means recommended for their treatment; but as we purpose noticing briefly the contents of the second part, we must content ourselves with referring the reader to the work itself.

The second part of the work comprises the special anatomy of the arteries, and the surgical points of interest connected with every branch of the arterial distribution. Connected with this part of our work are the beautiful lithographic illustrations of the surgical anatomy of the arteries, accurately copied from Cloquet's Anatomie de l'Homme, and executed in a masterly manner. To the descriptive anatomy of the arteries are appended surgical observations, embracing the accidents and diseases to which they are exposed; the mode of operating in tying them, each important operation being illustrated by a wood cut; the advantage of one method over another; the difficulties to be encountered; and the result in such cases as have demanded the ligature of the larger vessels. It is impossible, in the limits of a review, to do justice to a work so generally descriptive as that of our author; for no one can justly appreciate the advantage conferred upon the professsion by such a work, until he has carefully and closely followed it through its details, and made his mind familiar with its practical bearing, and valuable precepts, and therefore we most earnestly recommend the work before us to all, confident that every individual in the profession may cull from it, valuable and important principles—principles which he is liable at any moment to be called upon to exercise, for the relief of suffering humanity.

To the politeness of the publishers, Messrs. Lucas & Wight, we have been indebted for an opportunity of examining the sheets of this edition, during its passage through the press. On comparing it with the first, we find that important additions have been made to both the pathological and operative part of the work. The lithography too has been improved, and a number of wood cuts have been introduced, illustrative of the method of applying the ligature to each artery, which will greatly facilitate the comprehension of the several steps of the operation.

A. L. W.

COLLECTANEA.

Apis vero ratio media est; quæ materiam ex floribus agri et horti elicit, sed tamen eam propria facultate vertit et digerit.—Nov. Org.

1. *Establishment for teaching Practical Legal Medicine, attached to the University of Berlin.*—In "Horne's, Nasse's, and Wagner's Archives," an account is given by Dr. Wagner of the above establishment, that has no parallel in Europe. Its title demonstrates the objects for which it is intended; but the report as given by Professor Wagner developes them more in detail.

The practical school of legal medicine in the University of Berlin, was opened in the summer session of 1833.

All the cases of legal medicine that have been met with in this city during the year, have been made applicable to the instruction of the physicians and students that belong to the establishment. The mode of teaching pursued is as follows:

At different hours of the day, according to the matter presented, each student is admitted in his turn to look into the cases of living subjects, to perform judicial post-mortem examinations, and to analyze inorganic and inanimate substances; after which he is required to make a report on what has been submitted to him, in the same style as the district physician does. Moreover, the professor meets the students twice in the week, either for the purpose of explaining and discussing the facts already observed, or to distribute new cases among them; or lastly, to refute and pass judgment upon the reports that have been presented to him.

The students are exercised in the proper mode of examining adult and infantile corpses; and every one is aware how much practice and skill is requisite to appreciate the pulmonary docimasia of the latter. Every six months, a course is delivered on the modes of testing the presence of poisons, both mineral and vegetable; the modes these students practise.

The subjects comprised in medical police are included in this course of teaching. The students get an insight into every portion of this branch of judicial medicine, and a detailed explanation is given to them of all the instruments, apparatus, and collections that are necessary to its application. They are allowed to analyze alimentary substances and drinks, and the inspection of drugs is made by them in company and under the direction of a pharmaceutist.

A practical course of veterinary medicine is also connected with the objects of this establishment.

During the first year of its establishment, (from July, 1833 to 1834,) the practical school of legal medicine has been attended by sixty-three students, some of whom are already in practice. The course of instruction has comprehended 253 medico-legal questions, 217 of which refer to living individuals,

and 32 to dead subjects (judicial post-mortem examinations,) and 4 required the analysis of inorganic substances.

The inquiries made into the cases of the living individuals turned, in 183 instances, upon the state of the body, and in 34 instances, upon that of the mind. Of the latter, 27 were civil cases, and 7 criminal.—*London Medical and Surgical Journal, June*, 1835.

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2. *Remarks on the use of Oiled Silk and Warm Water dressing.* By Mr. Liston.—The plaister used by Mr. Liston to recent wounds, such as after amputations, &c. is composed of a spirituous solution of isinglass, spread over oiled silk; the solution is spread, when hot, on strips of the silk, and applied immediately. After amputations, the strips are used of considerable length, so as to give support to the flaps, and an interval is left between each, to allow the escape of matter, should adhesion not take place. Mr. Liston has used it for some years, and has found it to succeed in almost every case. It is easily applied, does not heat the limb, as the usual mode of dressing does, is easily removed in case of secondary hemorrhage, allows the escape of offensive matter, and prevents the fœtor attending the confinement of the discharge; often the wound does not require a second dressing, and the plaister frequently supersedes the necessity of a bandage. The use of warm water dressings, as employed by the same surgeon, consists simply in pledgets of lint, the size of the ulcer, dipped into warm water, and applied to the part, a piece of oiled silk a little larger being placed over it to prevent evaporation. It is found, in some cases, quite effective without the assistance of any other remedy; occasionally some slight astringent, such as a weak solution of sulphate of zinc or copper is indicated.

Both dressings are cleaner and less painful than any other; the last does not require a sponge; indeed, there have been no sponges used in the hospital for some time, except during operations. Mr. Liston said he had dispensed with them at Edinburgh, as he had seen the indiscriminate use of the same sponge by the various patients, attended with the worst consequences. It was often the cause of the spreading of one description of ulcers, of a malignant character, through the wards of the hospital.

It is not for the medicinal use of the water, as stated by a late writer on the subject, that this dressing is applied, it is in place of a poultice. It is by no means a novelty: many surgeons in the army and navy have employed it for years with success.—*London Medical and Surgical Journal, June*, 1835.

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3. *Curious Case in which Sand and Gravel Stones were found in the Trachea after drowning.*—C. F. H. aged 23, had been subject to epileptic fits since October, 1830, with intervals of a week or a fortnight. On the 5th of May, 1833, he was found dead in a rivulet; his face downwards, the head covered with the water, which was not a foot deep, and which therefore did not cover more than half his body.

On examination of the corpse, the most remarkable thing found was a quantity of sand and gravel stones of various sizes, in the trachea, below its bifurcation into bronchi; the largest of these stones was square, weighed at least a drachm, was half an inch long and broad, and half a line in thickness. It is almost impossible to conceive how this stone, which resembled others on the

bed of the rivulet, could have passed through the glottis. A great quantity of the sand filled the bronchi, and some of it was even found in the pulmonary vesicles: the whole quantity of sand found weighed between three and four drachms.

This is an exceedingly rare case: Orfila mentions only one such out of 50 cases of drowning (Dict. de Med. t. 20, p. 26.) The size of one of the stones, which exceeded the capacity of the glottis, proves that it could not have entered the trachea by a mere mechanical descent after death: but it renders it probable that it had been swallowed in the last moments of agony.—*Medicinisches Correspondenz--Blatt.—Lond. Med. & Surg. Journal, June,* 1835.

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4. *On Serous Effusion from the Membranes and into the Ventricles of the Brain, and its Connection with Apoplexy, and the Disorder allied to Apolexy.* By Dr. John Sims, physician to St. Marylebone Infirmary.—Of this essay it is difficult to give a sufficient account within the limits to which our plan restricts us. It seemed to be the result of extensive original pathological inquiries and of much "patient thought," and contained so much fact, and so little speculative matter, as to be ill adapted for condensation, consistently with justice to the author. The main scope of the learned author's argument seemed to us to be, to prove that the principal, if not the sole, cause of the disease usually termed serous apoplexy, is preternatural accumulation of blood within the cranium, and compression of the brain thence exclusively arising; and that the serous fluid so often found on examination of these apoplectic subjects, is referable to exudation from the vessels, directly and indirectly—to atrophy, and consequent diminution of the brain, and a physical tendency thence arising to extravascular accumulations. After shewing the general prevalence of the opinion (although opposed by several practical writers) that apoplexy may arise from serous effusion and consequent cerebral compression, by extracts from some standard works, and by reference to the statements of medical men as witnesses in coroner's courts, and, in private practice, in cases of post-mortem investigation or persons dead of apoplectic symptoms, in whose bodies no sanguineous congestion or effusion is detected, the author proceeded to relate the particulars of seventy cases, in confirmation of his views.

These cases the author distributed into five sections, of which the 1st consisted of a tabular view of fifty cases in which serous effusion was found in the ventricles or under the meninges, without any cerebral symptoms whatever before death; the subjects having died at various ages, from under ten to over seventy, (but nearly half between fifty and seventy,) and of various diseases, chiefly of the viscera, of the thorax and abdomen; mostly chronic. 2. The second contained particulars of four cases of copious serous effusion, in subjects in whom old apoplectic cysts were found, with or without paralysis; death arising from diseases not cerebral. 3. Six cases of serous effusion of long standing, with old apoplectic cysts, and recent fatal sanguineous extravasations. 4. Four cases of fatal simple sanguineous apoplexy. 5. Five cases of serous effusion of long standing, with congested or diseased vessels, and such as are usually considered examples of serous apoplexy, but which the author regards as instances of simple sanguineous apoplexy.

From the whole body of his cases and observations, the author conceived himself fully borne out in the following summary statement, with which he concluded his essay. 1st, That very copious effusion is found between the membranes, and in the brain, of persons of all ages, (and more especially between the ages of fifty and seventy years,) who have died of various diseases of the thorax and abdomen, and who manifested no appreciable symptom of cerebral disease during life; and that under similar circumstances, various other morbid appearances are found in the brain—as thickened membranes, diseased blood-vessels, tumours, &c.

2d. That effusion of serous fluid into the ventricles and membranes, to a very considerable extent, exists in the brain of persons who have suffered previous apoplectic attacks, attended with general or partial atrophy of the brain; and that, most probably, this effusion and atrophy have existed for many years, without producing the disease termed serous atrophy; for that persons so circumstanced live to an advanced age, and are destroyed by other maladies.

3d. From the cases of subsequent and fatal attacks of apoplexy occurring in persons in whom the brain had long contained a large quantity of fluid, it is probable that the brain, from this cause, is rendered less impatient of injury from extravasation of blood. This position is exemplified in a remarkable manner in the case of extravasation into the ventricles, and in that of extravasation on the surface of the brain.

4th. Seeing that it is acknowledged generally, that a merely loaded state of the blood-vessels is sufficient to produce all the symptoms of sanguineous apoplexy, and to occasion death, it is probable that when this state of the vessels is found, connected only with a small quantity of fluid in the membranes or ventricles, death has been occasioned by simple sanguineous apoplexy.

5th and lastly. The conclusion is highly probable, that in many instances of sudden or speedy death, which have been supposed to have been occasioned by the presence of serous fluid in the membranes or ventricles (discovered on dissection) the effect is not attributable to that fluid, or to serous apoplexy, but to simple sanguineous apoplexy, the fluid in the brain having nothing to do as a cause with the fatal event.—*London Medical Gazette, for June*, 1835.

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5. *Treatment of Recto-vaginal communication.* By Sir B. C. Brodie.—The communication between the vagina and rectum used to be one of the approbriums of our art, the patient's life being rendered miserable, with little or no hopes of recovery. Of late, however, a simple and scientific method of relieving the patient in these cases has been contrived by Mr. Copeland, who has succeeded in curing several patients labouring under it, simply by dividing the sphincter muscle of the anus. The sphincter muscle being divided, the fæces are not retained in the rectum; they run out as fast as they enter it, so that the bowel is kept empty and contracted, and altogether in a passive state, and the communication between the rectum and vagina is thus enabled to cicatrize. I do not know whether this would answer if the communication were of large size, but I am told that it has answered very well in the cases in which Mr. Copeland has hitherto employed it. I cannot but regard the application of this operation to these cases as one of the principal improvements of modern surgery; and the simplicity of the practice forms one of its

principal recommendations. Of course it can be recommended in those cases only in which, independently of the opening into the vagina, the parts are in a healthy state.—*Ibid.*

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6. *Camphorated Citrine Ointment in Hydrocele.*—A few weeks after a fall which occasioned an inguinal hernia, the right testicle, without any evident cause, began to swell, and became too painful to be handled. (The accident occurred to our correspondent.) This was soon followed by hydrocele, when the pain, which had by this time abated considerably, went off gradually, but the swelling seemed to be stationary. Meanwhile the hydrocele increased, and caused much suffering from tension of the scrotum. I consented to have the water drawn off, but in the interval a different mode of treatment occurred to my mind. Having frequently witnessed the beneficial effects of the citrine ointment, (*Unguentum Hydrargyri Nitratis,*) with camphor in cases of glandular and other indurated tumours, I thought it would also excite the torpid absorbents in those of an aqueous kind, and therefore preferred this trial to that of the knife. In applying it I grasped the left or sound side of the scrotum firmly, so as to make the tumour as tense as possible, and then rubbed a small quantity of the ointment (about 25 or 30 grains) over its surface for a due length of time. This I repeated every evening as long as it was necessary, generally before a fire. After using the ointment for a week or ten days, the tumour was evidently diminished in a bulk, and, persevering with it some time longer, the tumour eventually disappeared. In the meantime there was little alteration in the swelling of the testicle, but as it gave me little or no pain, except when handled, I left it to its own vis medicatrix, and that was slow enough, as it was fully three months before it was reduced to the size of the other. The hydrocele has never returned in any way. The citrine ointment was made by adding a drachm of camphor to an ounce of the ointment.—*London Lancet, May*, 1835.

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7. *Catechu in Mercurial Ptyalism*—Capt. B. twenty-five years of age, having had occasion to undergo a short course of mercury, whilst his regiment was encamped near Harwich, during rather a cold summer, unexpectedly experienced, about the fifth day of the course, approaching ptyalism; and when I was summoned to visit him in the evening, I found him in bed, spitting, or rather slavering, profusely, and presenting a picture of despair, from distress of mind, occasioned by his situation at a moment when he was daily expecting a visit from a party of valued friends, most of them females, to the camp. It was no easy matter to determine under these urgent circumstances what means to use. I had long ago proved the utter inefficiency of alum, opium, and other reputed antidotes against salivation, and at last I thought of catechu, of which I had made a strong decoction for some other purpose, though it was a remedy as yet untried, at least by me. To be brief, I desired my patient to take a wine-glass-full (about ℥ ii. to ℥ iiss.) of this decoction every two hours, or even oftener, if his stomach would bear it; and also to gargle his mouth and fauces as frequently as possible with the same. The result was, that when I visited him early on the next morning, the spitting had entirely ceased, and every other sign of the effects of mercury had wholly disappeared, debility from the ptyalism alone excepted. I think that since

this case occurred I have had further proof of the efficacy of catechu in obviating the ultimate effects of mercury, and I invite your numerous readers to make trial of it in cases of mercurial ptyalism. Instead of ʒ iiss. of catechu to half a pint of boiling water, according to the London Pharmacopœia, I use at least ʒ iij. to that quantity of boiling water; for whether infusion or decoction he used, it ought to be made as strong as possible.—*Ibid.*

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8. *Treatment of Ozæna.* By M. Trousseau.—In some observations on this troublesome, and often incurable disease, M. Trousseau makes the following remarks; my chief reliance in the treatment of ozæna and other chronic affections of the lining membrane of the nose. I employ it either in powder or solution. The first is either blown into the nose by the physician, or snuffed by the patient. The solution should be injected, in preference by the physician himself. The following is the powder I employ:

℞. Protochloride of mercury, grs. xxiv.
Red precipitate, xii.
Sugar candy in powder, ʒ ss. M.

The following is the solution:

℞. Corrosive sublimate, ʒ ii.
Dissolve in a sufficient quantity of rectified alcohol, and add distilled water, ʒ xii.

A small pinch of the powder must be forcibly snuffed up the nose by the patient eight times a day, the nostrils being previously cleansed of mucus. One or two tea-spoon-fulls of the solution should be added to a wine-glass full of teped water, and thus diluted, it may be either snuffed up the nose or used as an injection.—*Journal des Connaissances Medico. Chirurg. Mai,* 1835.

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9. *Retention of Urine occasioned by a Calculus lodged in the Pelvis of the Kidney, with absence of the right Kidney.*—The subject of this case was an English soldier, aged 36, who was attacked on the 20th of June, with retention of urine. Some years anterior to this period, he had passed a small calculus from the urethra, which, however, occasioned him no inconvenience, and since that time he had enjoyed good health. Eight days anterior to the time of his admission into the hospital, he was seized, after a chill, with pain in the left side and fever. The pain continued to increase during four days, at the end of which time, retention of urine took place, and he was unable during the four succeeding days to pass any water. The desire to void urine was at first slight, but afterwards became more urgent. On examination, it was found that the bladder was not distended, nor was there pain either in the region of that organ, or in the abdomen, on pressure. The patient complained constantly of pain in the left lumbar region, but when this part was pressed, it did not manifest much tenderness. On the introduction of the catheter into the bladder, which was accomplished with great ease, no urine followed. The patient had no appetite; was, however, thirsty, and vomited every thing taken into the stomach. He complained as little of pain in the left leg as in the shoulder of the same side; his perspiration exhaled no urinous odour, and the pulse was nearly natural. He was exceedingly restless, tossed almost inces-

santly, and uttered constant complaints, although it was impossible to fix upon any point as the seat of his distress. He was besides unable to sleep.

We suspected an incipient or fully developed nephritis, and an active antiphlogistic course was instituted, consisting of venesection, leeches to the left lumbar region, cataplasms, nitrate of potass, &c. On the night after his admission, and during the following day, the patient was delirious; the pain diffused itself over the abdomen, but was abated by the use of calomel, opium, and poultices, and again concentrated itself in the left side, in which situation it was now more intense than before. The repeated introduction of the catheter showed that there was no water in the bladder, and the passage of the instrument was now attended with some pain. Water was injected through the catheter into the bladder, but only that which was thrown up returned tinged of a brown colour. After these injections, the desire to void urine was increased, but the efforts proved ineffectual. The vomiting became more frequent, and, on the third day, the patient was affected with hiccup, which recurred on the fourth. The fever, delirium, and restlessness continued to augment in intensity, and he died on the morning of the fourth day.

Dissection.—The left kidney was completely surrounded by a mass of fat, and enlarged to twice its natural size. The surrounding cellular tissue was of a deep red colour, and in the pelvis of the kidney just above the commencement of the ureter was impacted a calculus, which was so firmly lodged that no urine could pass it. The pelvis of the kidney was very much dilated, but the urethra was perfectly natural. The bladder contained a small quantity of mucus, but no urine. The *right kidney was altogether wanting*, and its place was supplied by a small rudimentary mass not more than half the size of one of the suprarenal capsules. To this mass the emulgent artery was distributed, which was not larger than the spermatic artery, and its corresponding vein was of the same size. The emulgent artery took its origin from the aorta. The ureter on this side was as large as a crow quill, and though its canal was smaller, it was nevertheless pervious, except to the extent of two inches from where it united with the rudimentary mass which supplied the place of the kidney.—*Frick Annalen der Chirurgischen Abtheilung des allgemein Krankenhauses in Hamburg.*

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10. *Double Uterus.* By Dr. Albers, of Bonn.—The subject of this case was a female, aged 64, who from childhood had never enjoyed perfect health. The ordinary development of the mamma took place at the age of puberty, but the menses never appeared. Once a month, however, she suffered continuous lancinating pains in the left hypochondrium, associated with vomiting, and a dragging or bearing down pain about the pelvic region. At the age of 29 years, she was attacked with fever, attended with vomiting, violent pain of the head, and a bearing down pain about the lower part of the abdomen. On this occasion a small quantity of blood was discharged from the vagina. These attacks of pain of the side and vomiting continued to recur at intervals, but without any repetition of the discharge of blood. When she was 46 years old, on the occasion of one of these paroxysms, Dr. A. proceeded to examine the condition of the genital organs. The external parts were properly formed and covered with hair; but the vagina was found to be only an inch in length, and terminating in a blind extremity, beyond which no solid body could be

discovered corresponding to the situation of the uterus, so that it might have been inferred that this organ was wanting. The breasts were properly formed! After some years, she experienced a recurrence of her sufferings, which were now associated with difficulty of voiding urine; and after suffering a fortnight, she died.

The cavities of the head and thorax were healthy. In the abdomen, however, the redness of the peritoneum, the false membranes adherent to that structure, together with the albuminous effusion into its cavity, clearly demonstrated that death had been occasioned by acute peritonitis. The vagina was only half an inch in length, and ended in a blind extremity. About an inch and a half above, placed somewhat laterally, were found two bodies of the size of a large walnut, which were somewhat elongated, but presented no manifest connection with the vagina. From each of these bodies an elongated bundle of a fibrous structure ranged upwards and outwards, and terminated near another body, which was supposed to be the imperfectly developed and diseased ovary. The two first bodies were separated from each other by an interval of about three lines, and when laid open, each of them presented a small elongated cavity, containing some thick mucus, and lined by a membrane of a mucous character. The walls of this cavity were about two lines in thickness, and were composed of a white fibrous tissue. These two masses were rudimentary uteri, but neither the round or broad ligaments of that organ could be distinguished in the surrounding cellular tissue.—*Rust's Magazin der Gesammte Heilkunde.*

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11. *Horny excrescence of the Penis.*—An individual labouring under venereal disease which he neglected, finally became affected with condylomata about the prepuce. The margin of the latter became indurated and of a horny consistence, and several excrescences sprang up beneath it, which were uneven on their surface. One of these attained an enormous development. It extended off from one side of the penis in a spiral direction, and measured about two inches and a half in length. This excrescence was of a dark brown colour, semi-transparent, and resembled a piece of tortoise shell in its appearance. It was of a horny consistence, and might be compared to a piece of horn which has been softened by some oily substance. The diseased mass was excised with scissors by Dr. Alter, and when it manifested a disposition to be re-produced, the operation was repeated. The wound healed kindly, and the individual was directed to take internally the liquor *hydrarg. nitrici*, after which the disease did not return.—*Rust's Magazin der Gesammte Heilkunde.*

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12. *Fissures of the Cranium of new-born Infants.* By Dr. Lud. Casp. Jac. Von Siebold.—The woman whose offspring formed the subject of the present case, became pregnant for the third time, had a narrow pelvis, and was delivered by the unassisted powers of nature, of a stout well-formed female fœtus, which weighed six pounds. It however manifested no signs of life. On dissecting up the scalp, besides the other ordinary appearances of swelled head, a great quantity of blood was found extravasated upon the surface of the cranium on the left side. The left parietal bone was found thrust under the right along the sagittal suture, which deformity was greatest in the

vicinity of the greater fontanelle. The lambdoidal suture presented a similar overlapping of the bones, though in an inferior degree. The left temporal bone stood preternaturally outwards, and the whole head presented a deformed irregular appearance. In the left parietal bone three fissures were discovered, the largest of which ranged from the tuber obliquely upwards to the sagittal suture. In the vicinity of this point, the fragments were most separated, the fissure becoming narrower towards the tuber: it was about an inch and a half in length. The second fissure extended from the left coronal suture a little above the middle of the parietal bone, to the tuber of the latter, and measured an inch in length. The third was situated a little below the preceding, and, although its length was inconsiderable, its edges gaped more than in the others. The fourth fissure occupied the left frontal bone, and in the vicinity of it was found a considerable suggillation of the scalp. It ranged forwards, and terminated a little below the tuber of the bone after extending about an inch. It is probable that the first fissures were occasioned previously to the others, by the pressure of the head against the promontory of the sacrum, while that of the frontal bone took place during the revolution of the head in the act of expulsion. The vessels within the cranium seemed to have sustained considerable injury, as when the head was compressed, a considerable quantity of blood issued through the fissures.

Independently of other considerations, this case is important in a medico-legal point of view. The evidences of violence presented by the head, might, under suspicious circumstances, have been by some construed into a proof of infanticide, yet the circumstances of the case demonstrate the impropriety of attaching much importance to such injuries except where corroborative evidence can be drawn from other criteria. Such cases shew forcibly the necessity of great circumspection on the part of medical witnesses, and the absolute impropriety of pronouncing positively upon the commission of a crime from a few isolated data.—*Siebold ueber Fissuren am Kopfe Neugeborner bei naturlicher Geburt*, 1832.

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13. *Ossification of the Veins.*—In the body of a woman, aged 50 years, who died of cancer of the stomach, Schlemm found a varicose saphena vein of the right leg in a state of ossification. The length of the portion of the vein thus affected, was four and a half inches, when its convolutions were not unfolded, but when extended, measured seven inches. It was very much thickened, and hard to the touch; but this hardness and stiffness was interrupted at several points, so as to impart to the vessel a flexible articulated arrangement. Throughout the whole extent, with the exception of the small flexible points already mentioned, a hard substance was deposited between the two coats of the vein. This adventitious deposite was more irregular than those which form in the arteries, but was more unusually cylindrical, or *triangulo-cylindrical*, and in most situations, nearly equalled in thickness the diameter of the lumen of the vessel. At intervals, the coats of the vein seemed to be flattened and adherent, occasioning obliteration of the cavity. At no point, as far as the vein was opened, could any destruction of its internal tunic be discovered, which so often takes place in the arteries. The concretion could be easily separated through this membrane, but with difficulty through the outer coat, which was thick and uneven. Nor did the concretions at any point surround

the entire vessel, but were confined to one side. Their thickness, however, at several points, was such as to fill up the whole cavity of the vein. In their colour, these masses resembled bone, but examined with the microscope, they exhibited no cellular structures, though they presented many irregular excavations.—*Phœbus, de venarum osseis et calculosis. Berol.* 1832, *and Hecker's Wissenschaftlichen Annalen.*

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14. *Earthy Concretions in the cavity of the Veins.*—In the vesical vein of a female, aged 80, the uterine veins of whom, contained within the pelvis free calcarious masses, and the heart and aorta points of ossification, Dr. Becker found a globular, yellowish white mass, of a very hard consistence, which was composed of internal concentric laminæ.

In a woman, aged 46, who had died of cancer of the uterus inflicting extensive ravages upon the surrounding parts, there was formed in the left vesical vein, near the opening of the ureter, a small hard globular body as large as a pea, of a yellowish white colour, which, when struck with a metallic body, emitted a sound as though it were hollow. After it had remained with the other parts of the preparation in alcohol for about a year, it was taken out, and divided with a fine saw. It was found to be composed of two substances; one of which was of the yellow colour of unbleached bone, but did not present the cellular texture peculiar to the osseous tissue; the other, in smaller quantity, was very white, and was much more fragile and pulverulent. They were both disposed in irregular alternating concentric lamina. The mass contained two small irregular cavities, which were separated by a kind of partition. They were occupied by a small quantity of a white coloured, soft substance, which, when exposed to the air, acquired the consistence of chalk or lime. The concretion was attached within the vein by a loose cellular covering, which was not smooth, but presented numerous irregularities upon its surface. From this, however, it was detached with great ease. The veins were dilated throughout the whole of the diseased parts. In many of both the small and large ones were found masses of coaguli, and that which contained the concretion was obliterated above and below, so as to have the mass contained as it were in a cyst.

In the vesical vein of a man, aged 33, a globular concretion of the same appearance and composition was formed. The small vein opposite the concretion had its walls so distended as to present a globular figure, and was rendered almost transparent.

In the vesical veins of another man, several concretions were discovered. The smallest were nearly globular; the largest oblong, seven lines in length, by two and a half in diameter; smooth externally; of a yellowish white colour, and when sawed through the centre, its internal structure was found to be composed of two kinds of substance. One of these was yellowish and compact; the other white and more friable. They were disposed in irregular concentric layers, and the mass itself was surrounded within the vein by a thin adventitious covering of cellular tissue.

Two similar concretions were found in the veins of the prostato-vesical plexus of an old man who had suffered much from catarrhus vesici. The larger of these, of the size of a common pea, presented the same characters as those mentioned above. The smaller, however, which was about two milli-

meters in diameter, was found, when sawed through, to be composed of yellowish coloured concentric layers, between which, scarcely a trace of the white matter could be discovered.

Froreip found in one of the prostatic veins of the left side of a man, aged 50, a free concretion, as large as a pea, which was smooth on the surface, nearly globular, of a brownish grey colour, and of the consistence of fibro-cartilage. When divided with a scalpel, it presented a compact fibrous texture disposed in concentric layers, of the same colour as the exterior. The vein was somewhat dilated, but, in other respects, healthy.

In a case observed by Schlemm, the spermatic vein was double, and in each one a small concretion was formed. One of these, as large as a pea, and of a globular figure, was of a bony consistence externally, but contained within a pap-like, or chalky material. The other was smaller, and smooth on the surface. The first was attached to the walls of the vein, but the other was entirely free.

In the uterine veins of both sides of a female, aged 80 years, those vessels were found filled throughout the whole course, with cretacious concretions, which filled their entire cavity, and took their figure from the surrounding walls. These concretions were smooth, and of a brownish yellow colour externally; but when broken transversely, the fractured surface exhibited a lighter hue, and in the centre a small aperture, the remains of a regular canal, with even walls which traversed the recess, except at its extremities. This canal, however, near the centre of the concretion, approached here and there nearer to one surface than the other, and at some points was so small as to be scarcely visible.—*Phœbus, de concrementis venarum osseis et calculosis. Comment. pro. venia docendi, &c. Berol.* 1832.

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15. *Nitrate of Silver in Tonsilitis.*—It is well known that no disease is more likely to recur than suppurating tonsilitis, which, under the name of quincy, will return upon some persons, on the slightest exposure to a cold and damp atmosphere, subjecting him to repeated suppurations. It is perhaps not generally known, that on the access of this malady a vigorous and early application of lunar caustic, in the solid form, or dissolved in rain water, in the proportion of eight or ten grains to the ounce, will more certainly arrest the inflammation and prevent an abscess, than any other method of treatment. If, however, there should be fever, venesection and an emetic should be premised. The application of solid caustic to the tonsils until they "turn pale," gives but little pain. If it should escape from the quill and be swallowed, it may be decomposed with salt and water, or a solution of sulphate of magnesia.

[*Western Journal of the Medical and Physical Sciences, for July*, 1835.

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16. *Chalybeates in Dropsy.*—Dr. William Pettit, of Columbiana county, Ohio, has sent us a paper commending the use of rubigo ferri mixed with port wine, in the treatment of dropsy. He thinks that the influence of Dr. Rush, in favour of the antiphlogistic method, has had, in many instances, an unfavourable effect on the practice of American physicians. Dr. Pettit states, that his attention was some time since directed to this medicine, by Dr. Isaac Parker, of Jefferson county, in this state, an old and respectable

physician, who assured him that he was generally successful in the management of ascites and anasarca, by means of the following preparation:

℞. Carbonate of Iron ʒ i.
Port Wine ℔.
Mix.

Agitate when used, and give half an ounce three or four times a day.

Dr. Pettit has given two successful cases in detail. We shall abridge one of them.

A lady aged thirty-six years, after the birth of her third child, became ascitic, and in despite of a great variety of means, administered by different persons, both in and out of the profession, continued in that state for several months. When called to attend her, Dr. Pettit resorted to tapping and drew off thirty-eight pints of fluid. He then gave her the German mixture of cream of tartar, sulphate of potash, squills and tartar emetic, but symptoms of re-accumulation ensued. In this exigency he had resource to the rubigo ferri in port wine, which was perfectly successful. She subsequently became pregnant, when dropsical symptoms again returned, but were promptly arrested by a resort to the chalybeate.

We think it probable, that while some cases of dropsy requiring antiphlogistics are improperly treated in the opposite way, others are prolonged, or rendered fatal, by an adherence to the former, when the latter method is required. The books would no doubt furnish authority for giving sedative and refrigerant diuretics, like those administered to this lady, after the operation of paracentesis, but such a practice rests on no solid foundation. Tapping should never be employed as long as there is active or even sub-acute peritonitis, and after it is subdued, whether the water be drawn off or not, tonics, among which none are superior to the chalybeate preparations, are undoubtedly the proper remedies.

We would here inquire whether any of our readers have given a trial, in dropsy, to the sulphate of iron, in drachm doses, as recommended by the physicians of the Italian school? If so, we should like to be informed of the results of their practice, and would make them public.—*Ib.*

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17. *Exemption of certain parts of the Delta of the Mississippi, from Autumnal Diseases.*—In an interview which we lately had with the very intelligent and respectable Dr. Cartwright, of Natchez, he pointed out certain parts of the Delta of the Mississippi, which are proverbially exempt from summer and autumnal diseases, and deserve, in his opinion, to be classed among the very healthiest portions of the Union. They are the banks of the numerous bayous and lagunes (obsolete mouths of the Mississippi,) between the thirty-first degree of latitude and the Gulf of Mexico, lying west of Lafourche. The water in these bayous, five or six in number, is stagnant. On either margin there is a slip of land from a quarter to half a mile in width, that is sufficiently high to be cultivated, back of this slip is a cypress swamp, then a shaking prairie, and then a lake, the banks of which are uninhabitable. The water of the bayous although stagnant is clear, and almost hidden by aquatic plants, one species of which, the most abundant, is unconnected with the soil and floats in the water—having a knotted horizontal root, resembling that of the cane. Another appears to be the *pistia stratiotes* of the botanists.

From observations and inquiries made on the spot, and on similar localities in other parts of Louisiana, where the current of the bayous prevent the growth of these vegetables, Dr. Cartwright has come to the conclusion, that the sole cause of the great salubrity of the places referred to, is their action on the waters and the air; and, in accordance with these views, has taken measures to introduce them into the lakes further up the Mississippi, the shores of which are now infested with bilious fevers.—*Ib.*

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18. *Winter Retreat for those inclined to Pulmonary Consumption.*—The gentleman just quoted, has expressed to us the opinion, that the maritime portions of the state of Mississippi, lying below the thirty-first degree, and between New Orleans and Mobile, constitute one of the best retreats in the United States, for persons who are threatened with pulmonary consumption. They, however, in whom the disease is established, should not leave home for that or any other place in the South, as it has appeared to him, that a southern climate has rather accelerated than retarded the fate of such patients, which is very much the result of our own observation. The soil and climate of the tract of country, to which we have alluded, are described by Dr. Cartwright, as sterile, temperate, and comparatively free from humidity.—*Ib.*

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19. *Hot Douching in Sprains and Bruises.*—It is not uncommon to see cold water applied forthwith to parts which have been strained or bruised, while a state of nervous irritation and reduced circulation, still exists in the general system. This practice we take it, is radically wrong. Some years since, a judicious non-medical acquaintance took some pains to impress upon us the results of his own experience in favour of hot bathing in cases of this kind. After having given the practice a "fair chance," we are enabled to speak of it in terms of decided approbation. It is especially adapted to persons of a nervous and irritable temperament. We have at this time a patient whose case is in point, and has, indeed, suggested the propriety of this notice. In jumping from a high fence, she lit upon the outside of her left foot, and when taken up was unable to stand. Considerable tumefaction immediately followed, with a total inability to move the ankle-joint. Extensive ecchymosis has since ensued, around and above and below the outer ankle. Being kept in a horizontal posture, with her foot over a tub, hot water was poured over it by the hour, and repeated as often as the pain recurred. She is now convalescent, without the slightest symptom of inflammation. We need scarcely add, that *should* inflammation ensue, in a case of this kind, the hot water would not be the best remedy, being, in reference to that pathological state, preventive not curative.—*Ib.*

VARIETIES.

Editorial Notices and Acknowledgments.

Messrs. Carey, Lea, and Blanchard are about to put to press a Treatise on General Therapeutics, by Professor Dunglison. The well known abilities of this gentleman afford every assurance, that in this work he will supply a desideratum which has long been felt in this country. The same publishers will also shortly issue *Clark's Treatise on Pulmonary Consumption.*

We have to acknowledge the following publications, which have come to hand during the preceding month.

The Cyclopædia of Anatomy and Physiology. Edited by Robert B. Todd, M.B. Lecturer on Anatomy and Physiology at the Westminster School of Medicine, &c. &c. Part I. from *Abdomen* to *Animal kingdom.* London, Sherwood, Gilbert & Piper.

This work "is intended to embrace the whole of the sciences of Anatomy and Physiology, those terms being used in their largest sense as regards the animal kingdom." Besides the healthy and pathological anatomy of man, it will embrace the anatomy of the inferior animals, considered in groups according to the ordinary zoological principles of classification. It will also comprise a full exposition of the present state of physiological science.

The work is to be published in numbers of 112 pages each, printed in double columns, one number to appear on the first day of every second month, until the whole is completed, which, it is supposed, will require 20 parts.

The articles on Comparative Anatomy contained in the present number, viz. *Acalephæ*, by Dr. Coldstream; *Acrita*, by R. Owen, Esq.; *Amphibia*, by T. Bell, Esq.; and *Animal Kingdom*, by Prof. Grant, (*unfinished,*) we have read with great pleasure. Those on Human Anatomy and Physiology, though highly useful, are not what we have a right to expect in a work devoted exclusively to Anatomical and Physiological science in its fullest extent. The numerous wood-cut illustrations, which accompany the articles on Comparative Anatomy, add greatly to the value of the work.

Discourse on Self-limited Diseases, delivered before the Massachusetts Medical Society, at their annual meeting, May 27, 1835. By Jacob Bigelow, M.D. Fellow of the Massachusetts Medical Society, and Professor of Materia Medica in Harvard University. (*From the author.*)

The subjects of this very able address, deserve the attentive consideration of every member of the profession.

The Cholera Beacon, being a treatise on the Epidemic Cholera as it appeared in Upper Canada in 1832-4: with a plain and practical description

of the premonitory symptoms, &c., designed for popular instruction. By Elam Stimson, M.D. (*From the author.*)

Journal des Connaissances Medico-Chirurgicales, for July, 1835. (*In exchange.*)

The American Journal of Medical Sciences, for August, 1835. (*In exchange.*)

The American Journal of Pharmacy, published by the authority of the Philadelphia College of Pharmacy. New series, Nos. 1 and 2, for April and July, 1835. (*In exchange.*)

We cannot better express our opinion of this valuable publication, than by the declaration, that it ought to be in the hands of every physician and apothecary in the United States.

The United States Medical and Surgical Journal, No. 12, for July, 1835. (*In exchange.*)

The Medico-Chirurgical Review, for April, 1835.

The Boston Medical and Surgical Journal, Nos. 25 and 26 of vol. xii., and Nos. 1 and 2 of vol. xiii. The editor will greatly oblige us if he will send us No. 10 of vol. x. and Nos. 6, 7, 8, and 9, of vol. xi. as those numbers have not come to hand.

The Western Journal of the Medical and Physical Sciences, for July, 1835. (*In exchange.*)

We would respectfully ask of the Editors of the Medical Magazine to send us No. 7 of vol. i. Nos. 15 to 24, inclusive, of vol. ii. and No. 8 of vol. iii. as we have not received those numbers.

Of the Editor of the Transylvania Journal we would beg the favour to send Nos. 1, 2, and 3, of vol. 6, of his periodical, also the number for July, 1835, which we have not received.

With all these gentlemen, or any of our other cotemporaries with whom we have the honour to exchange, we shall be happy to reciprocate the favour, should they be in want of any numbers of our Journal.

Errata.—In Dr. Hulse's paper, No. x. p. 255, in the tenth line from the bottom, "The chief element in the generation of diseases" should read, the chief element in the generation of *these* diseases.

The lithographic illustration of Professor Smith's case of Extirpation of the Thyroid Gland, could not be obtained in time for our last number. It is subjoined to the present, and can be transferred to the proper place, page 309, by the binder.

ADVERTISEMENTS.

CINCINNATI COLLEGE.

MEDICAL DEPARTMENT.

The session will open on the last Monday of October, and continue to the end of February. Full courses of Lectures will be delivered on all the branches of the profession.

JOSEPH N. McDOWELL, M. D. *Special and Surgical Anatomy.*

SAMUEL D. GROSS, M. D. *General and Pathological Anatomy, Physiology, and Medical Jurisprudence.*

HORATIO G. JAMESON, M. D. *Surgery.*

LANDON C. RIVES, M. D. *Obstetrics and the Diseases peculiar to Women and Children.*

JAMES B. ROGERS, M. D. *Chemistry and Pharmacy.*

JOHN P. HARRISON, M. D. *Materia Medica.*

DANIEL DRAKE, M. D. *Theory and Practice of Medicine.*

JOHN L. RIDDELL, M. A. *Adjunct Professor of Chemistry and Lecturer on Botany.*

Six Lectures will be delivered daily, throughout the session.

Mr. Riddell will teach a private class on Chemistry, by examinations and familiar modes of illustration. His lectures on Botany, strongly recommended by the Trustees and Faculty, but not requisite to graduation, will be delivered in spring and summer.

The price of the ticket of each professor will be fifteen dollars, making an aggregate of one hundred and five—the matriculation fee, two dollars—the dissecting ticket, ten dollars; and the graduation fee, twenty dollars.

Those who intend to graduate must take the tickets of the professors before the 20th of November. No student will be admitted to examination for a degree who is not 21 years of age; of good moral character; has not studied medicine with a private preceptor for three years, including the time of his attendance on the lectures; and has not attended two full courses in this College, and taken the dissecting ticket once, or one in some chartered institution, having not less than five professors, and another in this college; but physicians who have been in separate practice four years, may become candidates after attending a single course. Students who attend two courses, and do not wish to graduate at the end of the second term, may continue to attend thereafter as long as they choose, by paying the matriculation fee only.

Clergymen having a pastoral charge, who are desirous of acquiring medical knowledge, but do not intend to change their profession, may attend the lectures gratuitously.

Students and attorneys at law, who wish to avail themselves of the benefits of the lectures on Medical Jurisprudence, can obtain tickets to that course, by paying five dollars.

Graduates of all other regularly organized and legally authorized medical institutions, will be at liberty to attend the lectures in this institution gratuitously.

The Board of Trustees have furnished the Faculty with ample lecture rooms, in their capacious and central edifice, where those who wish to prosecute practical anatomy, will, under the superintendance of the professor of Special and Surgical Anatomy, be furnished with commodious apartments and all desirable facilities. These apartments will be opened the first of October, to afford students who may desire to engage, personally in operative anatomy, without being interrupted by lectures, the requisite opportunities.

The united cabinets of anatomy—healthy and morbid, human and comparative—of Dr. McDowell and Dr. Gross, will be found extensive, diversified, and instructive; and as it is the fixed purpose of the Faculty to render their school eminently anatomical, they intend to adopt such measures as will effect a rapid augmentation of the museum of preparations.

Various courses of lectures by four of the professors, and several gentlemen out of the school, are now delivering, and will be continued till the regular session commences in autumn. These lectures are preparatory to the establishment of a permanent summer school, and for this year are gratuitous.

In conclusion the Faculty will add, that every Sunday morning of the three last months of the session, the professor of the Theory and Practice, will deliver a discourse on the social, moral, and religious duties of students and medical men; which of course the members of the class will be at liberty to attend or decline, according to their respective tastes.

By order of the Faculty:

DANIEL DRAKE, M. D. Dean,
Medical Faculty of Cincinnati College.

Cincinnati, Ohio, 30th June, 1835.

MEDICAL COLLEGE OF OHIO.

The Annual Course of Lectures in this Institution, will commence, as usual, on the last Monday of October, and close in the last week of February.

FACULTY.

JEDEDIAH COBB, M. D. *Anatomy and Physiology.*
JOHN LOCKE, M. D. *Chemistry and Pharmacy.*
ALBAN G. SMITH, M. D. *Surgery.*
JAMES C. CROSS, M. D. *Materia Medica.*
JOHN MOORHEAD, M. D. *Obstetrics and the Diseases of Women and Children.*
JOHN EBERLE, M. D. *Theory and Practice of Medicine.*
JOHN T. SHOTWELL, A. B. M. D. *Adjunct Professor of Anatomy.*

J. COBB, M. D. *Dean.*

UNIVERSITY OF MARYLAND.

The Lectures in the Medical Department of this Institution will commence on the last Monday of October, and continue until the first of March.

NATHANIEL POTTER, M. D. *Pathology and the Practice of Medicine.*

RICHARD WILMOT HALL, M. D. *Obstetrics, and the Diseases of Women and Children.*

NATHAN R. SMITH, M. D. *Surgery.*

JULIUS T. DUCATEL, M. D. *Chemistry and Pharmacy.*

E. GEDDINGS, M. D. *Anatomy and Physiology.*

ROBLEY DUNGLISON, M. D. *Materia Medica, Therapeutics, Hygiène, and Medical Jurisprudence.*

Clinical Lectures will be given at the Baltimore Infirmary, by the Professors of the Practice of Medicine and Surgery.

With a view to afford every facility in the prosecution of Practical Anatomy, the Demonstrator—Dr. Baxley—will open the dissecting rooms on the first of October.

ROBLEY DUNGLISON, M. D. *Dean.*

Baltimore, July, 1835.

ANATOMICAL THEATRE.

LECTURES ON

ANATOMY, PHYSIOLOGY, AND OPERATIVE SURGERY,

WITH DEMONSTRATIONS.

BY

WM. N. BAKER, M. D.

The Rooms immediately in the rear of the University Building, will be opened on the *first of October.* The Lectures will commence in the last week of October.

The rooms are convenient and well ventilated; and the undivided attention of the Demonstrator, with every facility for Anatomical pursuits, will be at the command of the class.

Baltimore, September 1, 1835.

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